UROP Projects Conducted in Academic Year 2023/2024

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
3D Printed Hydrogel Wound Dressing For The Treatment of Chronic Wounds	Jaynielle Claire Tan Pineda	Dr Wang Chi-Hwa		Completed
3D Printed Hydrogel Wound Dressing For The Treatment of Chronic Wounds (II)	Chua En Rui	Dr Wang Chi-Hwa		Completed
3D Printed Hydrogel Wound Dressing For The Treatment of Chronic Wounds : In Vivo Study	Hasina Begum Binte Mohamed Iqbal	Dr Wang Chi-Hwa		Completed
3D printing of blood vessels	Iman Zulhelmi B Hassan	Dr Tong Yen Wah		Completed
3D printing of blood vessels	Soon Li Xia Felicia	Dr Tong Yen Wah		Completed
A machine learning study on the hydrothermal carbonisation of anaerobic digestate	Tan Yong Boon	Dr Wang Chi-Hwa		Completed
A Study on the Jumping Assistance of the AireLevate Exosuit	Lim Zixin Isabel	Dr Yeow Chen Hua		Completed
A wearable limb cooling device for preventing chemotherapy-induced peripheral neuropathy	Sinega Rajendran	Dr Lim Li Hong Idris	Dr Aishwarya Bandla	Completed
Advanced Materials for Designing Functional Chemical Systems	Yuvanshankar S/O Karunanidhi	Dr Soh Siow Ling		Completed
Advanced Materials for Designing Functional Chemical Systems	Phan Thi Nguyet Minh	Dr Soh Siow Ling		Completed
Advancements and Limitations of Monitoring Devices for Left Ventricular Assist Devices: A Comprehensive Review	Ooi Jie Min	Dr Leo Hwa Liang		Completed
Analysis of the Impact of Generative AI in Modern Pedagogy: A Student Perspective	Marcus Ong Qin Yuan	Dr Lakshminarayanan Samavedham		Completed
Anomaly Detection using Sensor Data from Internet of Things (IoT) Devices	Chen Haorui	Dr Tham Chen Khong		Completed
Anything Style Transfer	Yeoh Jun Ting	Dr Wang Xinchao		Completed
Asia's Carbon Territories	How Yong Yang	Dr Chang Jiat Hwee		Completed
Automated bioreactor for CAR-T manufacturing	Hu Tianmu	Dr Tay Kah Ping, Andy		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Building humidity and carbon dioxide control for bioreactor	Kong Jun Rui	Dr Tay Kah Ping, Andy		Completed
Catalyst Design for Breakthrough Hydrogen Technologies	Nicole Wong Khai Wen	Dr Sibudjing Kawi		Completed
Characterization of Flat-Folding Operations	Xue Tingkai	Dr Jason Stoutsenberger Ku		Completed
Complexities in Supply Chains	Liang Jing Yun	Dr Chia Eng Seng		Completed
Compression algorithms for underwater video streaming	Joel Shruti Elizabeth	Dr Mandar Anil Chitre		Completed
Constructing Advanced Controllers using Smart Materials	Senthil Kumar Abirami	Dr Soh Siow Ling		Completed
Construction Robot Simulation with Physical Environment for Redesign Feasibility	Chen Guoyi	Dr Prahlad Vadakkepat		Completed
Data Interoperability - Digital Twins	Wang Yuanmeng	Dr Chia Eng Seng		Completed
Data Interoperability for Autonomous Mobile Robots	Tricia Boo Koh Wei Ping	Dr Chia Eng Seng		Completed
Data Interoperability for Smart Buildings	Oh Qi Ren	Dr Chia Eng Seng		Completed
Decentralized Multi-Robot Search of Unknown Environments	Jeric Lew Jieyi	Dr Guillaume Adrien Sartoretti		Completed
Design and engineering of photoelectrochemical flow reactors	Clement Wong Hong Shun	Dr Saif Abdul Kadir Khan		Completed
Design and Optimization of Piezoelectric micro focusing mechanism for wearable medical applications	Stephen Chua	Dr Wu Changsheng		Completed
Design and optimization of stiffness gradient hydrogels	Sammueal Ong Jun Kai	Dr Jennifer Lauren Young		Completed
Design of Miniaturized 3-D Printed Nozzles for Supersonic Flow Testing	Soh Ze Kai	Dr Chng Tat Loon		Completed
Design of sonic cage for the mitigation of noise	Nga Jing Wen	Dr Lee Heow Pueh		Completed
Developing a fully automated algorithm for ocular health screening using pupillary responses to light	Divyalakshmi Balasubramaniam	Dr Najjar Raymond		Completed

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Development of a modular bioreactor system for mesenchymal stem cell culture and extracellular vesicle isolation	Tan Teck Kai Glendon	Dr Chong Seow Khoon Mark	Dr Toh Wei Seong	Completed
Development of a portable EECP	Tan Jia Shuen Maegan	Dr Chong Seow Khoon Mark	Dr Leonard LL YEO (NUHS)	Completed
Development of a software control system for high resolution targeting of single cells for radiobiological experiments	Ng Zi Yi	Dr Andrew Anthony Bettiol		Completed
Development of Advanced Materials for Mitigating Global Warming	Ahluwalia Pahaul	Dr Gupta Manoj		Completed
Development of an online interactive portal for data analysis in biomedical engineering	Wen Jun Jie	Dr Alberto Corrias		Completed
Development of Magnetic Fabric for Innovative Wearable Applications	Chua Tse Hui	Dr Tural Khudiyev		Completed
Development of Mandibular advancement device (MAD) for Asians	Jodie Ooi Wenwei	Dr Leo Hwa Liang		Completed
Development of skin conductance monitoring device to detect hot flushes in midlife women	Cheekoty Prerana Aditi	Dr Leo Hwa Liang		Completed
Development of skin-integrated wearable electronics in monitoring solid-phase epidermal biomarkers	Zhang Hanrui	Dr Liu Yuxin		Completed
Drug release study for new delivery system	Shannen Lin Enxi	Dr Tong Yen Wah		Completed
Efficient Data Integrity Detection for Wearables	Chong Wei Xin, Barbara	Dr Rajesh Chandrasekhara Panicker		Completed
Encapsulating Enzymes in Metal-Organic Frameworks for Highly Stable and Sensitive Wearable Sweat Sensors	Singi Das	Dr Liu Yuxin	Dr Yang Le	Completed
Engineering a nanoporous carbon foam for energy storage and sustainability	Tay Ying Qian, Diane	Dr Barbaros Oezyilmaz		Completed
Engineering extracellular vesicles (EVs) for bone regeneration	Lim Xin-Er	Dr BIEGOHJ	Dr Toh Wei Seong	Completed
Engineering microbes	Li Shanxin	Dr Poh Chueh Loo		Completed
Engineering 'molecular clock'	Low Zhen Yuan	Dr Poh Chueh Loo		Completed
Engineering of automated multiphase catalytic flow reactors	Zhang Fangyuan	Dr Saif Abdul Kadir Khan		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Extracting a Crease Pattern from an Image	Gore Kyra Rahul	Dr Jason Stoutsenberger Ku		Completed
Fabrication of tunnelling magnetoresistance devices based on 2D materials	Goh Ting En Jonathan	Dr Ahmet Avsar		Completed
Fluorescence lifetime image processing for label-free cancer diagnosis and characterization	Jayachandran Deepsri	Dr Huang Zhiwei		Completed
Fluorescence lifetime imaging for label-free cancer diagnosis and characterization	Li Rubing	Dr Huang Zhiwei		Completed
Food waste to food	Lim Hui Qi Janel	Dr Tong Yen Wah		Completed
Food waste to food	Sng Shu Yi, Ruth	Dr Tong Yen Wah		Completed
From Garden City to Holiday Paradise: The Rebranding of Touristscapes in Singapore	Altoaimi Lina Walid S	Dr Chang Jiat Hwee		Completed
Fully Customizable Drug Tablets for Personalized Medicine	Chua Zhan Au	Dr Soh Siow Ling		Completed
Generation of patient-derived lymph node slice cultures using biomaterials engineering	Kevin Philip Fong Yingzhi	Dr Fong Li Shan Eliza		Completed
Generation of patient-derived peritoneal cancer ex vivo cultures	You Ruochii	Dr Fong Li Shan Eliza		Completed
Growth-adaptive neuroelectronics for tumoural therapeutics	Calvin Wong Kai Hui	Dr Liu Yuxin		Completed
How has COVID-19 control measures affected tropical urban air quality?	Ng Kai Ee Emmanuelle	Dr Yu Liya		Completed
Human Core Strength Measurement and its Clinical Applications	Chloe Soo Wen Ting	Dr Chui Chee Kong	Dr Chng Chin Boon	Completed
Hybrid Rocket Engines: CFD Modelling and Simulations	Amirul Raziq Bin Kahar	Dr Khoo Boo Cheong	Dr Jimmy Li Jiun Ming	Completed
Implementation of a 4Tx/4Rx Beamformer/MIMO Radar System	Hong Xingwen	Dr Koenraad Mouthaan		Completed
Implementation of Networked Synchronized System for Media Control in Low Latency High Bandwidth Media Applications	Lee En-Yi Hannah	Dr Chua Dingjuan	Dr Fu Yongwei	Completed
Information Retrieval from 2D CAD	Chan Kai Jun	Dr Yeoh Ker-Wei		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Interconnection methods for mini modules used in building integrated and infrastructure integrated photovoltaics (PV) (Student #1)	Gulati Shobhit	Dr Elliot Law	Dr Leow Shin Woei	Completed
Interconnection methods for mini modules used in building integrated and infrastructure integrated photovoltaics (PV) (Student #2)	Lim Wan Jie Luke Llewellyn	Dr Elliot Law	Dr Leow Shin Woei	Completed
Investigating hydrogel as thermal regulation material	Lu Xinkai	Dr Lee Wee Siang Vincent		Completed
Investigating the impact of hybrid solutions in coastal protection with a small-scale wave tank	Meng Ruhui	Dr Lei Jiarui		Completed
Investigating the Properties of Cervical Mucus: Insights into Female Fertility and Reproductive Health	Senthilkumar Mohanaselvi	Dr Leo Hwa Liang		Completed
Language-Guided PPT Generation	Li Borui	Dr Wang Xinchao		Completed
Laser speckle imaging of cancer cells	M Vrinda	Dr Chen Nanguang		Completed
Machine Learning in Optimization of Chemical Processes	Tan Yi Long	Dr Wu Zhe		Completed
Maximizing N2 to ammonia conversion via solar-driven biohybrids	Lee Mun Xuan	Dr Mao Xianwen		Completed
Mobile Interface for Wearable Health Monitoring	Tong Zheng Hong	Dr Tural Khudiyev		Completed
Modelling and Simulation of a Scalable Concentrated Solar Power System	Agrawal Saatvik Mayank	Dr Lim Li Hong Idris		Completed
Modelling of emerging contaminants in Singapore's coastal waters	Pang Yi Hahn	Dr Gin Yew-Hoong, Karina		Completed
Multi-armed bandits with side information	Chen Hsin	Dr Cheung Wang Chi		Completed
Multi-Floor Navigation (Mapping and Localisation) for the Visually Impaired using Visual SLAM	Yeo Meng Han	Dr Chua Dingjuan		Completed
Multi-needle Raman technique for brain tissue characterization.	Elise Tan En Ci Paa	Dr Huang Zhiwei		Completed
Next-Generation Artificial Muscles for Advanced Robotics	Lam Wan Yee Claire	Dr Tural Khudiyev		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Numerical Simulation of a Scalable Concentrated Solar Power System	Sparsh	Dr Lim Li Hong Idris		Completed
Pharmaceutical Drug Particle Engineering in Microfluidic Systems	Li Jinglun	Dr Saif Abdul Kadir Khan		Completed
Portable magnetic system for cell stimulation	Mohamed Bilal S/O Saibudeen	Dr Tay Kah Ping, Andy		Completed
Readiness Levels in Autonomous Mobile Robots	Mark Tan Jia Le	Dr Chia Eng Seng		Completed
Readiness Levels in Digital Twins	Ke Yuhan	Dr Chia Eng Seng		Completed
Readiness Levels in Smart Buildings	Liu Yiting	Dr Chia Eng Seng		Completed
Recycling of Carbon waste to nanomaterials for energy application	So Shao Yuan	Dr Wang Chi-Hwa		Completed
Remote Wearable Health Monitoring through Acoustic Sensor Technology	Chia Tse En	Dr Tural Khudiyev		Completed
Removal of Virus-loaded Aerosol and Dust from Atmosphere	Tan Wee Cher, Adison	Dr Soh Siow Ling		Completed
Removal of Virus-loaded Aerosol and Dust from Atmosphere	Low Qian Hua Claire	Dr Soh Siow Ling		Completed
Removal of Virus-loaded Aerosol and Dust from Atmosphere	Reuben Iris Esther	Dr Soh Siow Ling		Completed
Safety Analytics: Impact of climate change on construction workers' safety and health	Tan Hui Wen Clara	Dr Goh Yang Miang		Completed
Sensor-based process control of insect rearing for a circular urban food system	Ramie Lim Rui Min	Dr Elliot Law	Dr Adrian Furhmann	Completed
Separation of Charge at Interfaces	Yap Xin Ying	Dr Soh Siow Ling		Completed
Simulations of amorphous electrocatalysts	Du Jiesheng	Dr Sergey Kozlov		Completed
Soft hydrogel spheres for confinement mechanobiology	Chai Chin Wei	Dr Andrew William Holle		Completed
Study of shaped semiconductors for efficient solar-driven water splitting	Zhang Peiran	Dr Mao Xianwen		Completed

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Synthesis of Catalysts used for Recycling Plastic Wastes to form Carbon Nanomaterials	Minseo Kang	Dr Wang Chi-Hwa		Completed
Synthetic crosslinker for Young's modulus manipulation in biomedical applications	Sulogna Biswas	Dr Liu Yuxin		Completed
Systematic review of the power utilization and capacity of the Mechanical circulatory support devices	Foo Shu Hui	Dr Leo Hwa Liang	Dr Md Faizus Sazzad	Completed
Theoretical evaluation of novel channel MOSFETs based on novel materials	Wu Chaoming	Dr Liang Gengchiau	Dr Gong Xiao	Completed
Topography-induced cancer associated fibroblasts (CAF) states	Chae Yeongin	Dr Fong Li Shan Eliza		Completed
Tuning the size and crystallographic orientation of metal deposits for energy-dense metal batteries	Liu Wenze	Dr Mao Xianwen		Completed
Underwater press-to-talk digital voice communication system	Mahir Faysal	Dr Mandar Anil Chitre		Completed
Urban inequity in Singapore	Jordan Yeo	Dr Lee Kah Wee		Completed
Viscoelastic particle separation using autologous blood plasma	Park Hyunjin	Dr Kim Sangho		Completed
Wearable on-skin chemosensors	Clive Choong	Dr Alberto Corrias	Dr Yang Le	Completed
Wearable Robotic Exovest for Haptic Sensation Feedback	Lee Jeehyun	Dr Yeow Chen Hua		Completed

UROP Projects Conducted in Academic Year 2024/2025

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
2D materials	Amoz Chua Jun Kiat	Dr Silvija Gradecak-Garaj		Completed
3D Concrete Printing for PPVC to Enhance Construction Productivity	Sunny Wu Yihang	Dr Du Hongjian		Completed
3D printing of battery housing for pouch battery cell (Satellite application)	Revati Nair Yu-Ping	Dr Abhishek Rai		Completed
3D printing of blood vessels	Lim Xin Ying	Dr Tong Yen Wah		Completed
3D printing of blood vessels	Sinha Archi	Dr Tong Yen Wah		Completed
3D printing of blood vessels	Hur Sunho	Dr Tong Yen Wah		Completed
A Learning-Based IMU Dead-Reckoning for UAV Localization	Timotheus Tan Zhikai	Dr Lin Feng		Completed
A Low Cost Direct Force Feedback Forceps for Tying a Surgical Knot in Laparoscopic Surgery	Tan Xin Yi	Dr Wong Yoke Rung		Completed
A Multi-modal Thermo-haptic Head-mount Display for Immersive VR	Zhang Yichun	Dr Cai Shaoyu		Completed
Adaptive Grasping Strategies with a Hybrid Gripper	Darrel Yu Jun Chi	Dr Lim Li Hong Idris	Dr Wang Yuzhe	Completed
Adaptive Grasping Strategies with a Reconfigurable Gripper	Muhammad Afham Bin Mohamed Shahril	Dr Lim Li Hong Idris	Dr Wang Yuzhe	Completed
Advanced Materials for Designing Functional Chemical Systems	Sadasivam Aditya	Dr Soh Siow Ling		Completed
Advanced Materials for Designing Functional Chemical Systems	Huang Baoyi	Dr Soh Siow Ling		Completed
AI for Robotics	Zhang Jing Wen	Dr Ge Shuzhi		Completed
AI for Robotics	Tiara Mirchandani	Dr Ge Shuzhi		Completed
AI-Guided 3D Printing of Hydrogel Wound Dressings for Diabetic Foot Ulcer Management	Gupta Arush	Dr Wang Chi-Hwa		Completed

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Assessing surrogate models by balancing quality versus complexity	Wang Boyuan	Dr Iftekhar A Karimi		Completed
Automatic monitoring of tree water usage under climate stress	Tan Xuan You	Dr Elliot Law	Dr Luo Xiangzhong	Completed
Automating engineered microbes characterisation	Phoebe Lee	Dr Poh Chueh Loo		Completed
Automating the characterisation of engineered biological system	Joshua Yeoh Gan Soong	Dr Poh Chueh Loo		Completed
Automation and Analysis of an Exoskeleton for Rehabilitation	Dhruv Thanki	Dr Lim Li Hong Idris		Completed
Automation of Exoskeleton for an AI Assisted Rehabilitation Equipment	Shishir Balasubramanian	Dr Lim Li Hong Idris		Completed
Bioelectronic Interface for Gastrointestinal Biomarkers Monitoring	Leroy Wong Yan Zhe	Dr Yang Yiyuan		Ongoing
Bioengineered microfluidic hydrogel platform mimics the peritoneal microenvironment for enhanced peritoneal tumor explant viability and therapeutic evaluation	Jin Zhong Tang Winston	Dr Fong Li Shan Eliza		Completed
Boron nitride based quantum emitter generation through defect manipulation.	Muhammad Uwais B Mohmad Azali	Dr Koperski Maciej		Completed
Characterization of airborne microplastics	Ji Sihan	Dr Yu Liya		Completed
Chloroplast based nanofoundries of cell metabolites	Chow Yu Hin	Dr Leong Tai Wei David		Completed
Comprehensive Market Research and Validation for a Sensorized Trunk Exosuit	Phyllis Peh Yan Hui	Dr Yeow Chen Hua		Completed
Conceptual design of a concentrated solar heat system for membrane distillation	Chee Hock Chuan, Matthew	Dr Lim Li Hong Idris		Completed
Conformal Prediction on Online Data	Lim Jia Le	Dr Cheung Wang Chi		Completed
Control synthesis of inverter-based renewables	Tan Chou Rong Roel	Dr Peng Chih-Hsien Jimmy		Completed
Converting ammonia to hydrogen	Al Rammah Abdulrahman Fouad A	Dr Lum Yanwei		Completed
Creating Iconic Audio Experiences	Low Tse Han	Dr Yen Shih-Cheng		Completed

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Cryptos: past present & future of digital currency	Leng Jiayuan	Dr Garg, Hari Krishna		Completed
Design & Integration of Tool Changer (with end-effector) for Mitsubishi MELFA Cobot Arm	Yap Heming	Dr Chew Wanlong Nicholas	Dr Graham Zhu	Completed
Design and Testing of a 3D-Printed Device for Microscale Blood Vessel Connection	Kong Ye Xiang, Ray	Dr Leo Hwa Liang	Dr John Loh	Completed
Design Framework for Gerontechnology and Assistive Technology	Nguyen Ngoc Minh Tu	Dr Kah Chen Yong James		Completed
Design of a Compact GPGPU for Small FPGAs through adapting the VORTEX Project	Ou Ningxiang	Dr Rajesh Chandrasekhara Panicker		Completed
Design of MATLAB+VST wireless communication system to test and improve innovative silicon chips with best-in-class power	Gao Jiquan	Dr Alioto, Massimo Bruno		Completed
Design of Multimodal Speaker Extraction Intelligence System on Smart AI Eyewear	Zhang Yining	Dr Alioto, Massimo Bruno		Completed
Designing the ultimate anti-snoring pillow (Electronics)	Tanya Rai	Dr Yen Shih-Cheng		Completed
Designing the ultimate anti-snoring pillow (Sensors)	Roopashini Sivananthan	Dr Yen Shih-Cheng		Completed
Developing a chemically-locked neural interface for longitudinal single-unit electrophysiology	Lim Ying Qi	Dr Liu Yuxin		Completed
Developing a patient derived explant model for treatment of colorectal cancer.	Bai Yayue	Dr Fong Li Shan Eliza		Completed
Development and Evaluation of a 3D-Printed Anastomosis Device for Microvascular Surgery	Gilbert Tan Zhan Hong	Dr Leo Hwa Liang		Completed
Development and fabrication of Concentrated Solar Thermal (CST) system for production of biochar	Lee Chuan	Dr Lim Li Hong Idris		Completed
Development and fabrication of Concentrated Solar Thermal (CST) system for Water Distillation	Chen Siyu	Dr Lim Li Hong Idris		Completed
Development and Testing of an Array Optimizer Module with Maximum Power Point Tracking (MPPT)	Jacob George	Dr Abhishek Rai	Dr Sii Zhi Ying	Completed
Development of a low-cost underwater communication system	Harmony Lau Jue Eern	Dr Mandar Anil Chitre		Completed
Development of a Portable Wearable Soft Robotic Glove for Stroke Rehabilitation to Enhance Hand Motor Functions in Activities of Daily Living	Chong El Sa	Dr Yeow Chen Hua		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Development of a Tele-Operable Anthropometric Right Arm Module for Robotic Nursing Applications	Yeo Yong Yan	Dr Yeow Chen Hua		Ongoing
Development of an Active Biological Air Purification System	Chen Miao Jing Cheryl	Dr Soh Eng Keng	Prof Veera Sekaran	Completed
Development of backend system for global multi-ground station software	Li Junxian	Dr Goh Shu Ting		Completed
Development of bio-sensors using plant electrophysiology principles	Dawn Lee Ching Shin	Dr Soh Eng Keng	Prof Veera Sekaran	Completed
Development of educational script visualization tools for python	Leong Zhe Ming	Dr Goh Shu Ting		Completed
Development of E-nose for analysis of detrimental gases for urban agriculture	Sahoo Ishita	Dr Soh Eng Keng	Prof Veera Sekaran	Ongoing
Development of Exoskeleton for an AI Assisted Rehabilitation Equipment	Singhal Medha	Dr Lim Li Hong Idris		Completed
Development of GUI for global multi-ground station software system	Ethan Soh	Dr Goh Shu Ting		Completed
Development of hygroscopic materials for dehumidification of homes	Goh Kai Joon, Jeroy	Dr Tan Swee Ching		Completed
Development of hygroscopic materials for thermal management	Siow Chin Khang	Dr Tan Swee Ching		Completed
Development of interactive games based on Meta Quest in VR	Then Yi Ting Noelle	Dr Cai Shaoyu		Completed
Development of Nanostructured Materials for Energy-water nexus	Liu Ziheng, Clifton	Dr Ho Ghim Wei		Completed
Development of ovarian cancer tumor explant cultures for drug testing	Nathania Adora Cahyadi	Dr Fong Li Shan Eliza		Completed
Development of python block coding tools for tensorflow	Chiang Hui Xin	Dr Goh Shu Ting		Completed
Development of Silk-based Conductive Fibrous Bio-ink for Cardiac Tissue Engineering.	Janelle Tang Xinli	Dr Leo Hwa Liang		Completed
Effect of blood plasma rheology on the microhemodynamics in the microcirculation	Kim June-Cheol	Dr Kim Sangho		Completed
Effect of trees and greenbelt on the mitigation of traffic noise	Guo Anxiang	Dr Lee Heow Pueh		Completed

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Electrochemical carbon capture with aqueous flow chemistry	Chan Chu En,Spike	Dr Jing Yan		Completed
Enhancing nutrient recycling in aquaponics for sustainable farming	Nge Chi-E	Dr Gin Yew-Hoong, Karina		Completed
Entrepreneurship in emerging technologies	Felice Justino Limawan	Dr Kuo Ting-Kuei		Completed
Establishing an extracellular matrix microenvironment on a microfluidic chip for tissue slice cultures from human head and neck solid tumors to study therapeutic response	Chua Min Hui	Dr Fong Li Shan Eliza		Completed
Evaluating Electrochemical CO2 Conversion Materials: Hands-On Research Opportunity II	Ernest Yu Cheng Rong	Dr Andrew Barnabas Wong		Completed
Examining the impacts of emerging technologies on the aged care workforce	Ong Tian Gui Givson	Dr Lee Jung Joo		Completed
Examining urban airborne pollutants using Python	Teo Wen Wei Tricia	Dr Yu Liya		Completed
Experimentation with Open-RMF for Controlling Turtlebots in Block E2A	Mayukh Ghosh	Dr Chew Wanlong Nicholas	Dr Royston Shieh	Completed
Exploration of next-gen circuits and architectures for 5G communications embedded in smart objects (miniaturized to millimeter scale)	Lau En Xin, Grace	Dr Alioto, Massimo Bruno		Ongoing
Exploring the power of 3D concrete printing in precast concrete industry	Tan Kai Ying, Sue-Ann	Dr Du Hongjian		Completed
Exploring Two-Dimensional Materials for the Fabrication of Advanced Opto-Electronic Devices	Fan Syong Zhi	Dr Koperski Maciej		Completed
FASE Accumulator Enclosure Development	Hoo Zu Yang	Dr Lim Hong Wee		Completed
Food waste to food	Ashley Lean Jing Ning	Dr Tong Yen Wah		Completed
Food waste to food	Lee Zong Han Ryan	Dr Tong Yen Wah		Completed
From Brainwaves to Light Bulbs	Nguyen Duc Phong	Dr Chua Dingjuan		Completed
From Magnons to Quantum Phases: Redefining Materials Characterization with Electronic Raman Scattering	Ian Jonathan Lee Junxian	Dr Koperski Maciej		Ongoing

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FSAE Carbon Composite Simulation Verification	Tio Shao Wei	Dr Lim Hong Wee		Completed
FSAE Driver Display and Live Telemetry Development	Sadik Mohammad Farhan	Dr Lim Hong Wee		Completed
FSAE Front A-Arms and Rocker Development	Sam Nicholas Marrett	Dr Lim Hong Wee		Completed
FSAE High Voltage Systems Development	Suh Bosung	Dr Lim Hong Wee		Completed
FSAE Model Simplification Study for CFD	Justin Kyle Leonard	Dr Lim Hong Wee		Completed
FSAE Motor and Motor Controller Cooling Development	Rupan Kumar Manogar	Dr Lim Hong Wee		Completed
FSAE Power Distribution Module Development	Toh Yan Ting	Dr Lim Hong Wee		Completed
FSAE Rear A-Arms and Rocker Development	Xu Zhen	Dr Lim Hong Wee		Completed
FSAE Tyre Modelling Development	Dai Baizhou	Dr Lim Hong Wee		Completed
Green IC group: several other projects in chip design and smart hardware systems	Bock Kai Sheng	Dr Alioto, Massimo Bruno		Completed
Hands-on Evaluation of Materials For Electrochemical CO2 Conversion	T Hariidaran	Dr Andrew Barnabas Wong		Completed
Happy Feet - A Dance Game to Encourage Physical Activity Amongst Elderly	See Jun Long	Dr Kah Chen Yong James		Completed
Happy Feet - A Dance Game to Encourage Physical Activity Amongst Elderly	Tan Zi Yi	Dr Kah Chen Yong James		Completed
Happy Feet - A Dance Game to Encourage Physical Activity Amongst Elderly	Toh You Min	Dr Kah Chen Yong James		Completed
Harvesting Clean Renewable Rain Energy from the Solid-Liquid Interface	Yu Naifei	Dr Soh Siow Ling		Completed
Harvesting Clean Renewable Rain Energy from the Solid-Liquid Interface	Lennard Ho Zhenghui	Dr Soh Siow Ling		Completed
Harvesting Clean Renewable Rain Energy from the Solid-Liquid Interface	Loh Jun Yang	Dr Soh Siow Ling		Completed

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Highly stretchable bioelectronic hydrogel for minimally-invasive brain implantation	Tan Qiu Yue	Dr Liu Yuxin		Completed
How does the cellular antenna shape gene and neural activity in the brain during learning?	Yeo Xing Hwee	Dr Yen Shih-Cheng		Completed
How does the cellular antenna shape gene and neural activity in the brain during learning?	Huang Lilin	Dr Yen Shih-Cheng		Completed
Identifying different forms of Parkinsonism	He Ning	Dr Sangit Sasidhar		Ongoing
Identifying Responders and Non-Responders to Cancer Treatment Using FFPE Sections and Immunohistochemical Markers	Deeksha Bhat	Dr Fong Li Shan Eliza		Completed
Implementation of an enhanced RISC-V processor.	Lei Hao	Dr Rajesh Chandrasekhara Panicker		Completed
Increasing Electricity Generation for Solar Photovoltaics	Vera Heng	Dr Tay En Rong, Stephen		Completed
Integrating Artificial Intelligence with Decision Making	Qin Yumeng	Dr Xu Yunbei		Completed
Investigating and Enhancing Diffusion Models for Image and Video Generation	Tian Junjie	Dr Wang Xinchao		Completed
Investigating passenger discomfort in aviation	Jordan Tan Wei Zheng	Dr Yen Shih-Cheng	Dr Chris Asplund	Ongoing
Investigation of an Aerial Screw	Gregg Tey Yixiang	Dr Chng Tat Loon		Completed
Investigation of single particle electrocatalysis using functional imaging microscopy	Shim Wanseob	Dr Mao Xianwen		Completed
Liquid phase exfoliation for optoelectronics.	Lee Han Wei	Dr Koperski Maciej		Completed
LLM powered robot simulation with Jetson Nano Super	Nguyen Trung Hieu	Dr Lim Li Hong Idris	Dr Alfred Ang	Completed
LLM-powered robot simulation	Loke Wan Ching	Dr Lim Li Hong Idris		Completed
LLM-Powered Robot Simulation with LangChain and ROS	Li Zitong	Dr Lim Li Hong Idris	Dr Alfred Ang	Completed
Mechanical Design of Exoskeleton for an AI-Assisted Rehabilitation Equipment	Kaushik Telidevara	Dr Lim Li Hong Idris		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Microplastics released from ultrafiltration membrane systems for water treatment and the subsequent impact on organic leaching	Yeo Min En, Minette	Dr Hu Jiangyong		Completed
ML assisted design of functional core-shell structures with 2D nanomaterials	Wong Cheng Jun	Dr Koperski Maciej		Completed
Modeling Organic Molecule Transformations on Metal Nanoparticle Surfaces	Patrick Terrence Yu	Dr Sergey Kozlov		Completed
Modelling of Oxide Semiconductor Devices for 3D Integrated Circuits	Trinh Duy Hieu	Dr Gong Xiao		Completed
Molecular spectroscopy of organic molecules confined between 2D van der Waals structures	Albert Crisostomo	Dr Koperski Maciej		Ongoing
On-demand peak power management system using GaN based power converter and hybrid energy storage with super-capacitor	Chai Zi Yang	Dr Abhishek Rai		Completed
Optimisation of silk cocoon sericins for myoblast proliferation for Cultivated Meat Tissue Engineering	Huang Huixin, Jenny	Dr Leo Hwa Liang		Completed
Optimization of Serum-Free Medium Supplements to Enhance Cell Growth Kinetics in Cultured Meat Production	Zheng Qiaoyin	Dr Leo Hwa Liang		Completed
Optimizing Data Efficiency in Deep Learning via Advanced Augmentation	Dwivedi Arshita	Dr Motani, Mehul		Completed
Optimizing Investment Portfolios for Financial Returns and ESG Impact	Sim Boon Teck	Dr Ng Kien Ming		Completed
Optogenetic intervention in Aged Related Macular Degeneration	Pedapudi Vishnu Raghavi	Dr Daniel Teh Boon Loong		Completed
Optogenetic intervention in Glaucoma	Lynelle Koh Ling Ning	Dr Daniel Teh Boon Loong		Completed
Optogenetic Rejuvenation of ageing brain and eye	Chen Xianglong	Dr Daniel Teh Boon Loong		Completed
Parametric Airfoil Shape Optimization Based on Machine Learning	Akshita Jain	Dr Zhu Lailai		Completed
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial and Healthcare Use	Bernadette Anne Yeo Hui Zhi	Dr Yeow Chen Hua		Completed
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial and Healthcare Use	Choi Yongjoon	Dr Yeow Chen Hua		Completed
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial and Healthcare Use	Reyna Binte Sofyan	Dr Yeow Chen Hua		Completed

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Performance Evaluation of a Lower-back Supporting Exosuit for Industrial-Healthcare Use	Thun Trakarnwichit	Dr Yeow Chen Hua		Completed
Piezoelectric Sensors for Advanced Physiological Health Monitoring	Ryan Lee Jun Wei	Dr Tural Khudiyev		Completed
Pioneers of the Garden City: An Oral History of the Landscape Architecture Profession in Singapore, 1970s to 2000s	Radhakrishnan Srivarshini	Dr Maxime Cedric Decaudin		Completed
Precise and Autonomous Formation Flying Satellites	Irving Tay Yu Shun	Dr Abhishek Rai		Completed
Predicting and decreasing passenger discomfort in aviation	Lim Tze Yee	Dr Yen Shih-Cheng		Completed
Proposal for Vegetable Transplanting End Effector	Senthilkumar Srinithy	Dr Soh Eng Keng		Ongoing
Pyrolysis of algae biomass to create bio-oils	Hassan Bin Azhar	Dr Wang Chi-Hwa		Completed
Quantitative interrogation of neuromodulation effects in solid tumours	Matanguihan Rynlouise	Dr Liu Yuxin		Completed
Quantum emitters in hexagonal boron nitride	Jared Lam Kai Jin	Dr Koperski Maciej		Completed
Quantum mechanical optimization of transition-metal clusters covered by carbon monoxide	Samuel Tan Qing Hui	Dr Sergey Kozlov		Completed
Quantum Sensing with Hexagonal Boron Nitride	Hazel Yeo Ming Hwee	Dr Koperski Maciej		Completed
Rational design of nanocatalysts toward water splitting	Anson Lok Hoe Yin	Dr Zhao Ming		Completed
Rebar corrosion of seawater mixed concrete	Chin Hong Qi	Dr Du Hongjian		Completed
Recycling plastics in EV batteries	Lim San Joh	Dr Tong Yen Wah		Completed
Rehabot for Parkinsonian Gait Rehabilitation	Tan Joe Yee	Dr Kah Chen Yong James		Completed
Removal of Virus-loaded Aerosol and Dust from Atmosphere	Wang Ruoxu	Dr Soh Siow Ling		Completed
Removal of Virus-loaded Aerosol and Dust from Atmosphere	Hillary Gracia	Dr Soh Siow Ling		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Robotic Automation of Reliability Testing for Biomedical Camera Probes	Marcus Wong Jun Heng	Dr Chew Wanlong Nicholas		Completed
Separation of Charge at Interfaces	Raymand Tey Jia Cheng	Dr Soh Siow Ling		Completed
Shape control of Pt-based nanocatalysts for hydrogen production via electrochemical ammonia oxidation	Chin Yi En	Dr Zhao Ming		Completed
Silver Broadcast by seniors for seniors	Erica Molenberg	Dr Bina Rai		Completed
Smart nanoparticles to engineer plants	Pitt Yi Zhe	Dr Tedrick Thomas Salim Lew		Completed
Smart reactor system for food waste recycling using black soldier fly larvae (electronics)	Men Jiying	Dr Elliot Law	Dr Adrian Furhmann	Completed
Smart reactor system for food waste recycling using black soldier fly larvae (mechanical)	Nicholas Poon Jun Hao	Dr Elliot Law	Dr Adrian Furhmann	Completed
Study on septic tank for water pollution control	Teo Chun Yi	Dr Hu Jiangyong		Completed
Sustainable Solution to Route Optimisation Using a Fleet of Waste Removal Trucks	Tong Zheng Yin	Dr Tang Kok Zuea		Ongoing
The formation and recall of spatial information in the brain	Devinaa Kumeresh	Dr Yen Shih-Cheng		Completed
The formation and recall of spatial information in the brain	Teo Cheng Ren	Dr Yen Shih-Cheng		Completed
Understanding the impact of bright light exposure on eye growth, sleep, and circadian rhythms	Ng Jun En, Nathanael	Dr Najjar Raymond		Completed
Understanding the influence of long-term 3D confinement on stem cell behavior	Yang Xingkai	Dr Andrew William Holle		Completed
Unique property of PM2.5 and associated implication on health and air quality	Lim Xiang Long	Dr Yu Liya		Completed
Viscoelastic gastrointestinal mechanics	Ong Jia Wen Amelia	Dr Buist, Martin Lindsay		Completed
Viscoelastic particle separation using autologous blood plasma	Benjamin Justin Kau	Dr Kim Sangho		Completed
Wearable Fabric Electronics	Chenvisuwat Nita	Dr Tural Khudiyev		Completed

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What are the airborne pollutants emitting from chemical products in daily life?	Chin Eui Sung	Dr Yu Liya		Completed
Wireless Photodynamic Therapy	Alrick Kok Zi Xin	Dr Daniel Teh Boon Loong		Completed
Yield-Stress Fluid Enabled Macroemulsion Extraction for Active Ingredient Crystallization	Surendar Tvarita	Dr Saif Abdul Kadir Khan		Completed

UROP Projects Conducted in Academic Year 2025/2026

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
3D COF membranes for hydrogen purification and carbon capture	Baruna Adi Sanjaya	Dr Zhang Sui		Ongoing
3D COF membranes for hydrogen purification and carbon capture	Cho Joonhyung	Dr Zhang Sui		Ongoing
Adaptable Optoelectronic Skin Patch for Patient-Controlled Wearable Remote Photodynamic Therapy	Mehra Shambhavi	Dr Wu Changsheng	Dr Shih-Cheng Yen	Ongoing
AI Enabled Smart Wearables	Laura Punsu	Dr Tang Kok Zuea		Ongoing
An interactive web portal for biomedical data analysis	Li Jin	Dr Alberto Corrias		Completed
Atomic structures of metal catalysts covered with oxide films	Yao Cheng	Dr Sergey Kozlov		Completed
Automatic Assessment Creation	Gupta Shamit	Dr Mark Philip De Lessio		Ongoing
Automating SynBio experiments	Jervin Tan Si Kai	Dr Poh Chueh Loo		Ongoing
Automation and Analysis of an Exoskeleton for Rehabilitation	Harshita	Dr Lim Li Hong Idris		Completed
Automation of Exoskeleton for an AI Assisted Rehabilitation Equipment	Shah Keya Chintan	Dr Lim Li Hong Idris		Ongoing
Bioresorbable, Self-Powered Mini Cardiac Pacemakers	Tang Jing Qian	Dr Zhang Yamin		Ongoing
Calculus of Variations	Frederick Adlim	Dr Birgersson, Karl Erik		Ongoing
Carbon quantum dots for scavenging cell-free haemoglobin	Heo Seongyong	Dr Kim Sangho		Completed
Cell Culture-Based Study Evaluating UV and Ultrasound-Triggered Paclitaxel Release from Nylon-g-PNBMA Membranes	Bae Yumin	Dr Leo Hwa Liang		Completed
Cognitive Bias and its Applications in Industrial & Systems Engineering	Teo Jun Jie, Jeremy	Dr Tan Chin Hon		Completed
Compact Multifunctional Antennas for Robotics Platforms	Ryan Lee Han Ping	Dr Chen Xudong	Dr Chua Song Liang	Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Converting CO2 to biofuels	Zhang Jiahe	Dr Tong Yen Wah		Ongoing
Crops Performance Validation of Vertical Farms	Tran Thai Son	Dr Soh Eng Keng	Prof Veera Sekaran	Ongoing
Cross-modal interface development for health and well-beings applications	Shi Binxu	Dr Cai Shaoyu		Ongoing
Data-driven acoustic propagation modeling	Rohit Rishi Ranganathan	Dr Mandar Anil Chitre		Ongoing
Design and Fabrication of 3D-Printable Materials via Two-Photon Polymerization	Muhammad Shalihin Bin Faizal	Dr Liang Fang-Cheng		Completed
Design and Implementation of a custom RISC-V Processor for Hardware Acceleration	Teh Ze Xue	Dr Rajesh Chandrasekhara Panicker		Completed
Design and Implementation of a RISC-V based Hardware Accelerator	Sim Jing Jie, Ryan	Dr Rajesh Chandrasekhara Panicker		Completed
Designing and Prototyping of a Solar Tracker for Enhanced Concentrated Solar Power Collection	Huang Jing	Dr Lim Li Hong Idris		Ongoing
Designing and Prototyping of a Solar Tracking System for Enhanced Concentrated Solar Power Collection	Chen Yilin	Dr Lim Li Hong Idris		Ongoing
Development of a Modular Motion Control Architecture for Affordable Robotic Manipulation Platforms	Vishwamitre Rugved Makarand	Dr Lim Li Hong Idris		Ongoing
Development of a robot with AI capabilities	Chua Yong Liang	Dr Lim Li Hong Idris		Ongoing
Development of a robot with ROS capabilities	Zheng Weilin	Dr Lim Li Hong Idris		Ongoing
Development of a robot with vision capabilities	Zheng Weixuan	Dr Lim Li Hong Idris		Ongoing
Development of a Smart Current Sensor for Industrial Automation	Zhou Congxian	Dr Soh Eng Keng	Dr Toutain Romain	Ongoing
Development of a Smart Current Sensor for Robotic Automation	Liao Yiran	Dr Soh Eng Keng	Dr Toutain Romain	Ongoing
Development of an online portal for biomedical data analysis	Pang Sid Ann	Dr Alberto Corrias		Ongoing
Development of educational script visualization tools for pytorch	Yang Joonwon	Dr Goh Shu Ting		Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Development of ground station software network interface	Ye Yucheng	Dr Goh Shu Ting		Ongoing
Development of immersive museums and gallery experiences based on Apple Vision Pro	Renae Adeline Sim Sze Yin	Dr Cai Shaoyu		Completed
Development of Interoperable Systems for Vertical Farms	Catherine Tan Siew Hwa	Dr Soh Eng Keng	Prof Veera Sekaran	Ongoing
Development of Mobile AR for Interactive and Immersive Museum Experiences	Tay Khai Ning	Dr Cai Shaoyu		Completed
Development of Multimodal Immersive Reality for Touch-Based Interaction	Jiang Yi'An	Dr Cai Shaoyu		Ongoing
Development of Novel Metallic Materials Using Biomass Incorporation	Marshall Ng Zi Hang	Dr Gupta Manoj		Ongoing
Development of stiffness gradient hydrogel systems for studying cell-matrix interactions	Lee Jungwon	Dr Jennifer Lauren Young		Ongoing
Development of the Sensing System for an AI-Assisted Rehabilitation Equipment	Huang Zichen	Dr Lim Li Hong Idris		Ongoing
Developments of Protease Sensors using Oligopeptides	Ma Yujie	Dr Yang Kun-Lin		Ongoing
Digitalization and AI-driven Assessment of Aging Infrastructure for Structural Health Prediction	Ow Kai Mun	Dr Pang Sze Dai		Completed
Dynamic Optimization of Chemical Processes	Alrammah Deemah Hisham A	Dr Lakshminarayanan Samavedham		Completed
E-Bike Powertrain with Red Dot Mobility	Shah Rhea Parag	Dr Lim Hong Wee	Dr Sun Chun Lei	Ongoing
Energy Transition for Malaysia	Park Gun Woo	Dr Iftekhar A Karimi		Ongoing
Engineering nanoparticles to improve plant health	Ayisha Arshad	Dr Tedrick Thomas Salim Lew		Ongoing
Enhanced Instrumentation and Analysis of a Rehabilitation Device	Kwek Tze Xuan	Dr Lim Li Hong Idris		Ongoing
Evaluating Attractiveness and Quality of Community Assets	Yue Ling Xiao	Dr Thomas Kent Bean	Dr Alvin Chua	Ongoing
Evaluating Electrochemical CO2 Conversion Materials: Hands-On Research Opportunity	Pal Srijana	Dr Andrew Barnabas Wong		Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Evaluating Electrochemical CO2 Conversion Materials: Hands-On Research Opportunity	Hong Jianye	Dr Andrew Barnabas Wong		Ongoing
Evaluating Electrochemical CO2 Conversion Materials: Hands-On Research Opportunity	Kim Yerim	Dr Andrew Barnabas Wong		Ongoing
Evaluating mechanical properties of fiber reinforced 3D printed parts	Kayla Khoo Khia Hsuen	Dr Neo Kang Wei, Kenneth		Ongoing
Evaluating mechanical properties of fiber reinforced 3D printed parts	Neo Zheng Yu Ian	Dr Neo Kang Wei, Kenneth		Ongoing
Experimental Verification of AI-Guided Affinity Binder Design	Jeon Chaeyeon	Dr Yung Lin Yue		Completed
Exploring sensor network for heat health assessment	Wang Jiawei	Dr Wu Changsheng	Dr Yen Shih-Cheng	Ongoing
Exploring sensor network for heat health assessment	Shennon Tay	Dr Wu Changsheng	Dr Yen Shih-Cheng	Ongoing
Extending Anvil's Timing Safety Guarantees to SystemVerilog Assertion-Based Verification	Ding Dao En	Dr Henry Tan @ Tan Chin Chye	Dr Trevor E. Carlson	Ongoing
Financial Tool for Retirees	Chen Xuanyi	Dr Chia Eng Seng		Ongoing
Finding malodor sources in life	Teo Gui Jun, Vera	Dr Yu Liya		Ongoing
FSAE Dynamometer	Ooi Lee Seng Michael	Dr Lim Hong Wee	Dr Kenneth Neo	Ongoing
Gas-Signal–Coupled Microneedle Therapy for Psoriasis	Ruffiqa Binte Mohd Gaffron	Dr Lin Yiliang		Ongoing
Green oxidation processes for Industrial wastewater treatment	Jang Yewon	Dr Yang Kun-Lin		Completed
Harvesting Rain Energy by Solid-Liquid Charge Separation	Laus Chadre Rafhelle Luna	Dr Soh Siow Ling		Ongoing
Harvesting Rain Energy by Solid-Liquid Charge Separation	Ow Pei An, Dillon	Dr Soh Siow Ling		Ongoing
Health Assessment using AI and Design Tools	Yee Jia Jie	Dr Tang Kok Zuea		Ongoing
Highly expandable hydrogel bioelectronics for minimally invasive cerebral neurotechnology applications	Fan Bohan	Dr Liu Yuxin		Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
How university education should change in light of AI advances	Ong Choon Heng	Dr Tan Chin Hon		Ongoing
How university education should change in light of AI advances 2	Lyu Qinhang	Dr Tan Chin Hon		Ongoing
Hunting for balance: a variational method for equilibrium in dynamical systems	Mao Ruijie	Dr Zhang Mengqi		Ongoing
Hybrid Soft-Electromechanical Motor Modules for Silent, Compliant, and Digitally Precise Robotic Actuation	Wong Hong Qin, Garrett	Dr Yeow Chen Hua		Completed
Identifying Responders and Non-Responders to Immunotherapies Using FFPE Sections and Immunohistochemical and Immunofluorescent Markers	Wang Zhaoxiong	Dr Fong Li Shan Eliza		Ongoing
Imitation Learning for Vision-Language-Action Models in Robotic Manipulation	Mei Ziyan	Dr Lim Li Hong Idris		Ongoing
Immersive smell experiences of hawker food replication technology	Soon Shang Yi	Dr Cai Shaoyu		Ongoing
Implementation of a RISC-V based Hardware Accelerator for Machine Learning	Abdul Wahab Irfan S/O Ziawdeen	Dr Rajesh Chandrasekhara Panicker		Completed
Integrated electro-optic modulators	Sun Qifan	Dr Zhu Di		Ongoing
Integrated entangled photon source	Kong Tongwei	Dr Zhu Di		Ongoing
Intelligent system for checking precise medical parts	Yap Bo Yu	Dr Tang Kok Zuea		Completed
Intelligent system for surgical tools checking and accounting	Choy Men Kitt	Dr Tang Kok Zuea		Ongoing
Intelligent Virtual Eye Screening Algorithm (iVESA) Using AI and VR	Kummarikunta Talitha	Dr Tang Kok Zuea		Ongoing
Investigating passenger discomfort in aviation	Sampson Bong Shung Hoong	Dr Yen Shih-Cheng	Dr Chris Asplund	Ongoing
IoT sensors development to track the utilization of warehouse automations	Cheo Zhi Xian Matheu	Dr Soh Eng Keng		Completed

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Irreducible Representations of SL(2,R)	Mohamed Nabeel Bin Hamzah	Dr Birgersson, Karl Erik		Ongoing
Laser-Induced Graphene-Based Soft Bioelectronics	Vinuta Ramkumar	Dr Liu Yuxin		Ongoing
Learning Method for Millimeter-Wave Short-Range Imaging	Zheng Huijie	Dr Chen Xudong		Ongoing
LLM-based Interactive Conversational Agents for Virtual Reality	Ni Shi Yong	Dr Cai Shaoyu		Ongoing
LLM-powered applications for a robotic arm	Hu Lifan	Dr Lim Li Hong Idris		Ongoing
LLM-powered Robot Simulation	Mao Xiaohan	Dr Lim Li Hong Idris		Ongoing
Mapping and Speculating on Care Networks with Migrant Domestic Workers in Singapore	Liu Bing Jie	Dr Lee Jung Joo		Completed
Maskless Lithography: Tailoring 2D Materials with Direct Laser Writing	Low Jia Hao Justin	Dr Koperski Maciej		Completed
Mechanical degradation of silk scaffolds under cyclic loading for ACL	Chok Wei Xin	Dr Leo Hwa Liang		Ongoing
Mechanical Design of Exoskeleton for an AI-Assisted Rehabilitation Equipment	Xie Robert	Dr Lim Li Hong Idris		Ongoing
Metal-Organic Framework Modified Enzyme Biosensors for Long-Term Continuous Monitoring	Low Jia Shuen	Dr Liu Yuxin	Dr Yang Le	Completed
Modeling Alcohol-Exacerbated Drug-Induced Hepatotoxicity Using Liver Organoids	Senthilkumar Samriddhi	Dr Leo Hwa Liang		Ongoing
Modelling of 5G mmWave baseband processing	Wang Wenmiao	Dr Alioto, Massimo Bruno		Ongoing
Nanomechanics of ferromagnetic phases in CrBr3 membranes	Tanisha Singhal	Dr Koperski Maciej		Completed
Nanosensors for plant health monitoring	Chen Liguang	Dr Tedrick Thomas Salim Lew		Ongoing
NeuroAI: Training artificial neural networks to perform spatial navigation	Mathew Saayuj Ion	Dr Yen Shih-Cheng		Ongoing
Ni-based Electrocatalysts for Oxygen Evolution Reaction	Qin Weichen	Dr Xue Junmin		Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Non-invasive Cerebral Fractional Flow Assessment for Functional Evaluation of Intracranial Atherosclerotic Stenosis: A Multi-scale Hemodynamic Modeling Approach	Sananda Srikanth	Dr Leo Hwa Liang		Ongoing
Non-invasive Cerebral Fractional Flow Assessment for Functional Evaluation of Intracranial Atherosclerotic Stenosis: A Multi-scale Hemodynamic Modeling Approach II	Kimberly Niam Xin Ning	Dr Leo Hwa Liang		Ongoing
Numerical simulation of 3D concrete printing	Li Pengfei	Dr Du Hongjian		Ongoing
Online conformal prediction	Zhou Fandi	Dr Cheung Wang Chi		Completed
Optical properties of conjugated polymer/tellurium hybrids	Zhou Yuying	Dr Koperski Maciej		Ongoing
Optimizing Investment Portfolios for Financial Returns and ESG Impact	Daniel Paw Zhang Sheng	Dr Tang Kok Zuea		Ongoing
Optogenetic Rejuvenation of ageing brain and eye	Ng Kai Heng Jackie	Dr Daniel Teh Boon Loong		Ongoing
Organoid Models for Investigating Acetaldehyde-Induced Metabolic Stress and Injury in Alcoholic Liver Disease	Ho Yin Love	Dr Leo Hwa Liang		Ongoing
Organoid Models Reveal Mechanistic Connections and Sirolimus Efficacy in Liver-Vascular Steatosis and Foam Cell Formation	Jordan Low Jun Yi	Dr Leo Hwa Liang		Ongoing
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial-Healthcare Use	Josephine Lim	Dr Yeow Chen Hua		Ongoing
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial-Healthcare Use	Selvaraj Ramkumar Sakthi Maheshwaran	Dr Yeow Chen Hua		Ongoing
Performance Evaluation of a Lower-back Supporting Exosuit for Industrial-Healthcare Use	Eesha Rao	Dr Yeow Chen Hua		Ongoing
Photoluminescence Studies on Lead-Free Metal Halide Perovskites	Melvin Lee Khang Ming	Dr Koperski Maciej		Ongoing
Photosensitive Materials-mediated Regulation of CO₂ Fixation for Enhanced PHB Production in Cyanobacteria	Yek Zheng Feng	Dr Lin Yiliang		Ongoing
Preventing Adhesion of Atmospheric Dust onto Surfaces by Electrostatics	Lee Qi Xuan Shanon	Dr Soh Siow Ling		Ongoing
Producing Biofuels from CO2 using cyanobacteria	Nguyen Thi Que My	Dr Tong Yen Wah		Ongoing

Project Title	Student Name	Supervisor	Co-supervisor	Project Status
Automated Chemical Robotic System for Educational and Research Applications	Tan Mei Ling, Felicia	Dr Saif Abdul Kadir Khan		Ongoing
Real-Time 3D Object Localization for Vision-Guided Robotic Manipulation	Badrinath Sandhya	Dr Lim Li Hong Idris		Ongoing
Recognizing and reducing cognitive bias in human-AI interactions	Leong Jiandi, Nathanael	Dr Tan Chin Hon		Completed
Rehabot for Parkinsonian Gait Rehabilitation	Justin Ang Tze Hai	Dr Kah Chen Yong James		Completed
Re-Inventing the Internal Combustion Engine	Yang Jeeho	Dr Lim Hong Wee		Ongoing
Re-Inventing the Internal Combustion Engine	Pradyumn Vashishtha	Dr Lim Hong Wee		Ongoing
Re-Inventing the Internal Combustion Engine	Wai Chee Yin	Dr Lim Hong Wee		Ongoing
Reliable Decision Making via Robust Data-Driven Optimization	Xia Yuanjun	Dr Napat Rujeerapaiboon		Ongoing
Remote micro-robotic platform for contactless lifts and autonomous mobile robots	Xu Weizheng	Dr Tang Kok Zuea		Ongoing
Robotic handler for precise parts	Chen Hongyu	Dr Tang Kok Zuea		Ongoing
Rutherford Backscattering Spectrometry for Non-Destructive 3D Characterization of Advanced Integrated Circuit Devices	Ivie Poh Yong Qi	Dr Van Kan, Jeroen Anton		Completed
Scalable Mixed Integer Programming Algorithms for Modern Decision-Making Problems	Yang Jiangge	Dr Wang Guanyi		Completed
Scaling Analysis of Chemical Processes	Huang Hui Shan	Dr Lakshminarayanan Samavedham		Ongoing
Sensing & Feedback Technologies for a Smart Guitar	Toh Yan, Joan	Dr Irmandy Wicaksono		Ongoing
Separation of Charge at Interfaces	Chua Hui Yi	Dr Soh Siow Ling		Completed
Silk-based scaffolds for aligned muscle fibre production in cultured meat	Dena Trisna Binte Shukore	Dr Leo Hwa Liang		Ongoing
Smart nanoparticles to engineer plants	Dineshkumar Maheswaran	Dr Tedrick Thomas Salim Lew		Completed

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Smart system for checking precise parts (TE)	Tan Ping Hui	Dr Tang Kok Zuea		Completed
Smart system for handling precise parts (TE)	Nigel Yeo Tong Wei	Dr Tang Kok Zuea		Completed
Smart Wearable to Monitor Vital Signs Using AI	Agarwal Krishna	Dr Tang Kok Zuea		Ongoing
Smart wearables to monitor the vital signs of individuals in an outdoor environment	Lim Rui En Chloe	Dr Tang Kok Zuea		Ongoing
Smart wearables: A new ubiquitous interface for daily activities	Lim Jia Le	Dr Cai Shaoyu		Ongoing
Smart wearables: A new ubiquitous interface for daily life	Muhammad Irfan Bin Abdullah	Dr Cai Shaoyu		Ongoing
Soft materials characterisation for bioelectronics	Lee Yu Han	Dr Liu Yuxin		Completed
Solutions for High Temperature fluctuations in Greenhouse Farm	Chua Ming Yang Gavin	Dr Soh Eng Keng	Prof Veera Sekaran	Ongoing
Space object detection and Tracking	Hu Jiamo	Dr Goh Shu Ting		Ongoing
Spintronics devices based on novel 2D tunnel barriers	Arul Chandra Shivani	Dr Ahmet Avsar		Ongoing
Standalone system for processing precise parts (TE)	Wong Weng Hong	Dr Tang Kok Zuea		Completed
Swiss origins in Graphic Design Education and it's relevance to SEA	Yang Yixuan	Dr Reppard Brian Stone		Completed
System Architecture and Integration Methodologies for Multi-Modal Robotic Systems	Zhang Yuke	Dr Lim Li Hong Idris		Ongoing
Technoeconomic and Life-cycle analysis comparison of Lyophillization/Freeze drying vs spray drying/conventional precipitation for isolation of large molecules drug substance.	Han Jaeyoung	Dr Lee Lai Yeng	Adjunct Prof Lee Mei	Ongoing
Technoeconomic and Life-cycle analysis of selected bioprocess	Joanne Siak Zhu Eng	Dr Lee Lai Yeng		Ongoing
The Humanity of Craft: A History of Graphic Design Education	Ng Yixuan	Dr Reppard Brian Stone		Completed
Towards stable CO2 reduction electrolyzer performance	Kee Joon Wee, Adalric	Dr Lum Yanwei		Ongoing

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Training microrobots to swim using large language models	Chen Shimin	Dr Zhu Lailai		Ongoing
Translational Validity of Idealized Aneurysm Models for Predicting Flow Diverter Efficacy Using Computational Fluid Dynamics	Hannah Binte Mohamad Yusof	Dr Leo Hwa Liang		Ongoing
Ubiquitous computing: Building your new IoT-driven computing future	Reagan Moses Widjaja	Dr Cai Shaoyu		Ongoing
Uncertainty Quantification in Compound AI Systems	Vora Yugam Jinesh	Dr Birgersson, Karl Erik		Ongoing
Unconventional computing using non-volatile memories and FPGA	So Youngseo	Dr Yang Hyunsoo		Ongoing
Using AI, VR and AR for eye screening	Aravind Theertha	Dr Tang Kok Zuea		Ongoing
Vision-Language Grounding for Natural Human-Robot Interaction	Chakraborty Shrabasti	Dr Lim Li Hong Idris		Ongoing
Wall-coated Yield-stress-fluids (YSF)-suspended catalysts for multi-phase chemical flow reactions	Crystal Tan Shyuan Ling	Dr Saif Abdul Kadir Khan		Ongoing
Wearable digital sensors for assessment of mild cognitive impairment	Wong Hui En Eunice	Dr Wu Changsheng		Ongoing
Study on septic tank for water pollution control	Teo Chun Yi	Dr Hu Jiangyong		Completed
Sustainable Solution to Route Optimisation Using a Fleet of Waste Removal Trucks	Tong Zheng Yin	Dr Tang Kok Zuea		Ongoing
The formation and recall of spatial information in the brain	Devinaa Kumeresh	Dr Yen Shih-Cheng		Completed
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Unique property of PM2.5 and associated implication on health and air quality	Lim Xiang Long	Dr Yu Liya		Completed
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Wearable Fabric Electronics	Chenvisuwat Nita	Dr Tural Khudiyev		Completed
What are the airborne pollutants emitting from chemical products in daily life?	Chin Eui Sung	Dr Yu Liya		Completed
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Yield-Stress Fluid Enabled Macroemulsion Extraction for Active Ingredient Crystallization	Surendar Tvarita	Dr Saif Abdul Kadir Khan		Completed