UG Summer Research Internship 2022
Project List

No.	Research Project Title	Dept	Name of Supervisor
1	Engineering DNA Nanostructures for Detecting Disease Biomarkers	BME	CHOI Chung Hang Jonathan
2	Microfluidics and AI for Drug Screening	BME	DINH Ngoc Duy
3	Optogenetics Tool for Nuclear Rotation Quantification	BME	DUAN Liting
4	Optogenetic Control of Protein Translocation from Nucleoplasm to Nucleolus	BME	DUAN Liting
5	Optogenetic Control of Intracellular Lipid-Lipid Phase Separation	BME	DUAN Liting
6	Wearable Health Device for Sleep Apnea Monitoring	BME	GAO Zhaoli
7	Artificial Intelligence for Data Interpretation and Analysis Towards "Smart" Biosensors	BME	MAK Wing Cheung Martin
8	Soft Robotics for Medical Applications	BME	TONG Kai Yu Raymond
9	AR Rehabilitation System	BME	TONG Kai Yu Raymond
10	Small Data Learning for OCT Image Analysis	BME	YUAN Wu Scott
11	Real-time Cell Segmentation for Quantitative Phase Imaging	BME	ZHOU Renjie
12	Large Scale Data Analytics	CSE	CHENG James
13	Open Topics on Distributed Computing	CSE	CHENG James
14	Continual Learning Knowledge Graph Embeddings	CSE	CHENG James
15	6D Object Pose Estimation of Transparent Objects for Smart Robotic Grasping	CSE	DOU Qi

16	Learn to Process and Manipulate 3D Geometry	CSE	FU Chi Wing
17	3D Shadow Detection - Associated Point Detection	CSE	FU Chi Wing
18	On Improving Shadow Detection Performance	CSE	FU Chi Wing
19	Potential Disease Prediction Based on Electronic Health Records Analysis and Deep Learning	CSE	LI Yu
20	Signal Peptide Discovery with Protein Language Model-Powered Deep Learning Methods	CSE	LI Yu
21	Discover Novel Efficient Mini-CRISPR for Gene Editing Using Deep Learning and Natural Selection	CSE	LI Yu
22	Antimicrobial Peptide Discovery with Protein Language Model-Powered Deep Learning Methods And Natural Selection	CSE	LI Yu
23	Use of Machine Learning in Indexing	CSE	LO Chi Lik Eric
24	Deep Learning-Based Time Series Analysis and Forecasting	CSE	XU Qiang
25	Human-Interactive Tangibles	EE	REN Hongliang
26	Channel Prediction in Massive MIMO Systems	IE	CHEN He
27	Use of Machine Learning for RF-based Indoor Localization	IE	CHEN He
28	Use of Machine Learning for Radio Modulation Classfication	IE	CHEN He
29	Source Code Protection for Smart Contract	IE	LAU Wing Cheong
30	Predicting Mobile Traffic Dynamics by Spatial-temporal Graphs with Real-world Data	IE	LAU Wing Cheong
31	Delay-Sensitive Rate-Adaptation Algorithm for Live Video Upstreaming	IE	LEE Yiu Bun Jack
32	Adaptive Streaming for Short-Video Services	IE	LEE Yiu Bun Jack

33	Machine Learning with Compressed Measurements	IE	LI Cheuk Ting
34	Algorithms for Optimization of Non-Convex Information Functionals	IE	NAIR Chandra
35	Local Maximizers of Marton's Region for Ternary Input Alphabets	IE	NAIR Chandra
36	Deep Reinforcement Learning for Robot Manipulation	MAE	Juan Luis ROJAS SUAREZ DEL REAL *(Left CUHK in 2023)*
37	Dynamic Sampling for Monte Carlo Simulaton	SEEM	AHN Dohyun
38	Optimization Methods for Data Analytics and Machine Learning	SEEM	SO Man Cho Anthony
39	Learn to Optimize: Dense Neural Network Training using Graph Learning	SEEM	SO Man Cho Anthony
40	Convex Parimutuel Mechanism for Horseracing Odds Computation	SEEM	SO Man Cho Anthony
41	Graph Representation Learning	SEEM	WANG Sibo