

CityU Summer Research Internship Programme 2021 - Project List

Department	Project Title	No. of Vacancy
Architecture and Civil Engineering	Covid-19 impact on urban space in Hong Kong	1
	Urban patterns of Covid-19 in Hong Kong	1
	Value Network Analysis for Public Space Management in Hong Kong	2
Biomedical Engineering	Vision and communication for swarm of small robotic fish	2
	Design of complaint wheel/leg for small mobile robots	1
	Microbots for Biomedical Applications	2
	High-resolution functional brain imaging using light and ultrasound	2
	Stretchable piezoelectrics based epidermal sensors for electronic skin	1
	Wireless battery-free flexible activity monitors	1
	Microfluidic System for the Real-time Detection of Rare Cells for Disease Identification	2
Wearable materials for healthcare	2	
Biomedical Sciences	Inhibition of cancer cell growth by novel Hsp inhibitors	1
	Molecular epidemiology of complex diseases	1
	The role of pathogenic autoantibodies in autoimmune diseases	2
Chemistry	Chemicals in the Environment : Friends or Foe	1
	Using computers to study organic reactions	1
	Using computers to study reactions involving transition-metal complexes	1
	Luminescent transition metal complexes for biological applications	1
	Learning through projects: Advanced characterization technique training using the world's thinnest material	2
	Biosynthetic study on fungal natural products	2
	Theoretical Prediction of Binding Affinities of Organic Compounds on Aqueous Nanodroplets	1
	Theoretical Prediction of Binding Modes of Chiral Molecules on Metal Ions	1
	Investigation of anticancer activity of metal-based drug candidates for the treatment of aggressive tumours	3
Computer Science	Introduction Study in Metagenomics	1
	Introduction Study in DNA Sequence Analysis	1
	Introduction Study in Cancer Prediction	1
	Introduction Study in Cheminformatics	1
	Data Science and Its Applications	1
Electrical Engineering	Data Analytics for Complex Diseases	1
	Application of Machine Learning to Predict Binding Strength Between Receptor Protein on Cell Membrane and Chemical Compound	1
	Tracking and Analysis of Infant Movements Using Machine Learning	1
	AIoT Data Processing Method and Architecture	2
Mathematics	Framelets on Manifolds and Graphs with Applications	1
	Tensor regression for crowd density estimation	1
	Image processing for medical images	1
	Generating geometric body shapes through machine learning and inverse scattering technique	1
Mechanical Engineering	Bio-inspired 3D printing of mechanical metamaterials	1-2
	Mechanical behavior of hybrid structures fabricated via 3D printing	1-2
Materials Science and Engineering	Synthesis and structural characterization of layered perovskite ferroelectrics	1
Physics	Light manipulation by artificial structures	1
	Highly mismatched oxide semiconductors and/or transparent conductors for flexible solar cells	1-2
Systems Engineering and Engineering Management	Development of Machine learning algorithm for data extraction from unstructured reports. An case study using quality assurance report for solar modules	1
	Detection of anomalous behavior in social network data	1
	HR analytics: matching new employees to organizations based on personality data	1
	Analysis of sensor data for predictive maintenance application	1
	Statistical monitoring of time-between-events in quality engineering	1-2
	Q4.0 – Quality Assurance in Industry 4.0	1
	A systematic review with meta analysis on construction safety	1
A systematic review with meta analysis on transportation safety	1	