ARNOLD YEUNG

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Education

University College London (UCL)   2019-2022
Bachelor's Degree (Honours) in Data Science, Geography
- Grade: First Class Honours on track
- Big/spatial data and statistical analysis with **R (R Studio), Python, SQL and QGIS**
- Dissertation: Predicting building age of Tong Laus in Hong Kong using **CNNs** and **computer vision** on Google street view images

Li Po Chun United World College of Hong Kong (UWC)   2017-2019
International Baccalaureate (IB): Bilingual Diploma, 7 in Mathematics
- Selected to join students from **80+ countries** under an **acceptance rate below 20%**

Professional Experience

Hong Kong Productivity Council (Smart City Division) – Hong Kong   Jun 2021 – Aug 2021
Summer Intern (Robotics and AI Software Engineering)
- In charge of the R&D of the "MiniMover" series, six indoor autonomous vehicles, two of which are inspection robots servicing at MTR depot and station (Hong Kong underground railway company)
- Designed and implemented a new cross-floor route with elevator ride for delivery robots with Python ROS
- Developed and deployed AI human detection onto Jetson Nano to enhance the robot's elevator entry and exit processes, PyTorch, Tensorflow, OpenCV for development and Nvidia Deepstream for deployment

RaSpect Intelligence Inspection Limited – Hong Kong   Jan 2021 - Jun 2021
Intern (AI Software Engineering and Data Science)
- Joining the AI-powered predictive architecture inspection company while maintaining studies
- R&D of computer vision algorithms of more than 50000 automatic drone images under supervision of H.P. Ho, PhD (Yale), M.D. Filippo, PhD (HKUST), S. Asadiabadi, PhD (Koç)
- Enhanced the Python data pipeline that utilises Detectron2, YOLOv5 for the training of defect detection AI models, developed understanding on TensorFlow, Keras, PyTorch, NumPy, Pandas, etc
- Redesigned the database into COCO format, matched with DevOps changes on GitLab CI/CD deployments

Leadership Experience

UCL Leadership and Management Society / UCL Geographical Society   Apr 2020 - present
Academic Event Director / Events Officer
- Led the organisation of career exposure events, with a diverse range of industries covered, such as finance, consulting, tech and two newly initiated division: real estate, art and culture
- Networked with ex/current employees from leading IB/Consulting firms (Goldman Sachs, WST) for CV workshops, panel sharing sessions, etc

50th and 51st Student Association, Wah Yan College, Hong Kong   Jun 2016 – Sep 2018
External Vice President / Secretary of External Affairs
- Elected by 800+ students to manage and organise external events of the school
- Acted as the emcee and vice chairperson of the annual joint school Christmas ball, managed logistics, catering, performer invitation and promotion (design and film), with 100+ participants
- Started up a business by holding a stall at HK Lunar New Year Fair, facilitated investment sourcing, recruitment, product design and promotion, involving HK$110000+, gaining a revenue of 10%

Additional Information

- Quadrilingual: Native in English, Mandarin and Cantonese Chinese, Proficient in Japanese
- Avid volunteer in education and health: Served 300+ underprivileged students and 200+ elderlies, persons with intellectual, psychiatric and physical disabilities in Kazakhstan, China and Hong Kong
- Athlete of WYHK and UCL Athletics Team, specialising in jumping, assisted UCL in winning LUCA and Varsity

Technical Summary

- Python
- R (Studio)
- SQL
- Amazon Web Services, Google Cloud, Microsoft Azure
- Power BI, Power Query
- Microsoft Office suite (Word, Excel and Powerpoint)
- Adobe Photoshop, Adobe Premiere

Academic Details

o **Causal Inference in Data Science**: statistical methods for causal inference with R (matching; regression; weighting; fixed-effects; difference-in-differences; regression discontinuity designs; instrumental variables; and synthetic control)

o **Measurement in Data Science**: measurement strategies with R (axiomatic analysis, dimensional analysis, latent variable models, supervised and unsupervised scale/class measurement, regression, linear indices, principal components analysis (PCA), exploratory factor analysis (EFA))

o **Mining Social and Geographic Datasets**: data mining with Python, spatial network/mobility analysis and modelling, machine learning, text analysis

o **Database Systems**: Analysing, specifying, designing and implementing data management systems, with a focus on the theory and practice of relational database systems with SQL

o **Data Analysis**: Applied statistics including regression (panel data, multilevel models and poststratification), spatial analysis and quantitative text analysis with R

o **Quantitative Research Methods**: Descriptive statistics, data visualisation, data access, probability sampling, hypothesis testing, inferential statistics and linear regression with R

o **Geocomputation**: Advanced spatial and statistical data analysis techniques with R and QGIS (spatial autocorrelation, point pattern analysis, interpolation, GDC)

o **Data Visualisation and Cartography**: developed competencies in different software packages for advanced data visualisation and mapping with R and GIS apps