

# CHANASAK MAHANKARAT (WINN)

+447848399197

cm2617@ic.ac.uk

London, UK

## EDUCATION

**MEng Computational Bioengineering, Imperial College London** **Oct 2017 – Jun 2022**

- Modules: Data Analysis, Computer Vision, Reinforcement Learning, Adaptive Signal Processing
- Overall Grade: First Class Honours (Expected)
- Award: 2017-18 Engineering Dean's List (Top 10% of the cohort)
- Master's thesis: Quantification of fungal burden in histology images using convolutional neural networks

**Singapore-Cambridge A-Levels, St. Andrew's Junior College, Singapore** **Jan 2015 – Dec 2016**

- Distinctions in Physics, Chemistry, Mathematics and Economics; Awarded Jacob Ballas Scholars' Award

## TECHNICAL SKILLS AND TECHNOLOGIES

**Programming:** Python, Java, C++/C, MATLAB, Bash **Cloud:** Microsoft Azure, AWS

**Tools:** Git, Jenkins, Docker, Kubernetes, Helm, Terraform, Prometheus

**Data:** NumPy, Pandas, scikit-learn, Matplotlib, Keras, Tensorflow, Pytorch, PostgreSQL, MySQL

## WORK EXPERIENCE

**BenevolentAI, Site Reliability Engineer Intern** **Jul 2021 – Sep 2021**

- Built an internal Django web application for the management of whitelists
- Integrated with RDS MySQL database, Okta for authentication and Squid for seamless proxy whitelist update
- Built a CI/CD pipeline for containerising, packaging, and deploying the application in EKS
- Provisioned AWS resources with Terraform and monitored the application with Prometheus
- Reduced time on whitelist update workflow by 8 times while providing improved auditing and validation

**GE Digital, Software Engineer Intern** **Jul 2020 – Jun 2021**

- Automated deployments of GeoSpatial Server products using Bash in AKS, EKS and bare-metal environments
- Containerised back-end components and deployed them into EKS cluster for high availability and scalability
- Created Appstream 2.0 images, stacks, and fleets for Smallworld applications, allowing them to be streamed
- Automated GUI testing using Katalon Studio and Sikuli and integrated it into a Jenkins CI/CD pipeline

**Heteronomics, Data Science Consultant (Part-time and Remote)** **Jun 2020 – Aug 2020**

- Cleaned and analysed more than 10 years' worth of economics time-series datasets using pandas and numpy
- Built time-series models such as ARIMA to forecast economic indicators of interest

**Imperial College London, Undergraduate Research Assistant** **Jul 2019 – Sep 2019**

- Worked on a super-resolution ultrasound imaging technique
- Performed motion correction on ultrasound videos using image registration technique
- Performed microbubbles localisation to generate super-resolution ultrasound images

## UNIVERSITY PROJECTS

**Quantification of fungal burden in histology images using deep neural networks** **Oct 2021 – Present**

- Building convolutional neural networks (CNN) such as U-Net, SegNet and FCN8 with various backbones such as VGG16 and ResNet-50 to perform semantic image segmentation on histology images
- Performing data augmentation to artificially expand the dataset with synthetic data

**Development of a data labelling application for machine learning application** **Nov 2019 – Jan 2020**

- Worked in a team of 5 to prototype a Java application to label positions of ants
- Built a back-end server with PostgreSQL database to accept HTTP requests and deployed on Heroku

## EXTRA-CURRICULAR ACHIEVEMENTS

**Industrial Liaison, Imperial College Bioengineering Society** **Aug 2018 – Jun 2019**

- Established connections with healthcare companies and secured sponsorships for the society