Chen Sihao (Shawn)

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EDUCATION

Nanyang Technological University (NTU)   **Singapore**
Bachelor of Science in Computer Engineering (with Hons) for Renaissance Engineering Programme (REP)   *Expected Dec 2021*
Master of Science in Technology Management
- **cGPA:** 4.81/5.00, 1st Class, **Awarded** REP Dean's List 2021, REP Scholarship, Koh Boon Hwee Scholars Award Beneficiary

Imperial College London (ICL)   **London, United Kingdom**
Concurrent with REP during the 3rd year of studies   *Sep 2019 – May 2020*
- **Relevant Coursework:** Mathematics for Machine Learning, Machine Learning for Finance, Computer Vision, Deep Learning

WORK EXPERIENCE

Shopee   **Singapore**
Machine Learning Engineer Intern   *May 2021 – Jul 2021*
- Experimented and improved deep models for Click Through Rate (CTR) prediction for ads ranking with billions of data points
- Automated the entire data preprocessing, training and evaluation pipeline for the deep, distributed CTR models
- Utilised: Apache Hadoop, Spark, Tensorflow, Horovod, Kubeflow for distributed machine learning, Bash scripting in Linux env

Gojek   **Singapore**
Data Scientist Intern   *Jun 2020 – Nov 2020*
- Deployed face recognition (FR) and verification models for fraud prevention, identity verification and automated KYC
- Benchmarked different approximate k-nearest neighbours (ANN) strategies for fast visual face similarity search (>2M faces)
- Utilised: Annoy, FAISS, NMSLIB for ANN. Python to perform CRUD operations with Elasticsearch. Google Cloud Platform

McLaren Applied   **London, United Kingdom**
Modelling and Decision Science Intern   *Jul 2019 – Sep 2019*
- Benchmarked Generative Adversarial Networks (GANs) for anomaly detection and prediction against other methods
- Utilised: Keras for GAN models, Flask & Angular for prototype full stack Web App, Scikit-Learn for anomaly detection methods

SOFTWARE PROJECTS & COMPETITIONS

Final Year Project @ Multimedia Lab NTU: Deep Image Enhancement (Grade: A+)   *Jun 2020 – Present*
- Domain adaptation between synthetic and real low-light images using Cycle-GAN inspired methods implemented in Pytorch
- Achieved low-light image enhancement through data augmentation and attention-guided UNet
- Awarded Global Undergraduates Award 2021 – Global Winner in Computer Science Category

Kaggle   *Feb 2019 – Jun 2021*
- Shopee Code League (SCL)
  - SCL21 Address Elements Extraction – Top **4%** of 1034 teams. Utilised: IndoBERT for token classification
  - SCL20 Product Detection - Top **1%** of 823 teams. Utilised: Transfer Learning using EfficientNetB7 for image classification
  - SCL20 Marketing Analytics - **2nd place** of 368 teams. Utilised: Feature extraction and LightGBM for email campaign analysis
- National Data Science Challenge - Top **6%** of 360 teams; Utilised: Bag-of-Words Tokenisation, Linear SVM for text classification

SIA App Challenge   *Sep 2018 – Oct 2018*
- Developed a prototype Android app that automates the calculation of food wastage in flights
- Utilised: YOLOv3 for object detection, devised a novel food waste estimation method by analysing HSV colour space of images

Software Engineering Project @ NTU   *Sep 2018 – Nov 2018*
- Designed an Android app with an algorithm that recommends a meeting place based on 2 coordinates given by the users
- Utilised: Dart for Android App frontend, Java for server side with Python for backend algorithm calculation

SKILLS & CERTIFICATIONS

- **Language:** English (Fluent) and Mandarin (Fluent); **Programming Languages**: Python, Java, C, C++, SQL, MATLAB
- **Certifications**: Data Science in Python (Upcode Academy), Modern Big Data Analysis with SQL (Cloudera) [Apache Hive & Impala]

LEADERSHIP & VOLUNTEERING

Welfare Services Club – Centre Head   *Sep 2017 – Sep 2019*
- Spearheaded voluntary tutoring of up to 50 primary and secondary school students at Thye Hua Kwan Family Service Centre (THK FSC) Boon Lay and REACH Powerhouse

National Day Parade (NDP) 2018 – Public Relations and Protocol Committee   *Apr 2018 – Aug 2018*
- Planned and organized the ticketing process for NDP 2018 to ensure smooth and efficient entry
- Led a small team of volunteers to usher up to 30,000 spectators

REP Freshman Orientation Camp – Chief Programmer   *Nov 2017 – Aug 2018*
- Directed a team of 20 facilitators in planning the games and programmes of the orientation camp