

Wilton Chuah

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EDUCATION

Georgia Institute of Technology (Atlanta, GA)

Dec 2024

MSc in Computer Science and Engineering

Cummulative GPA: 3.80/4.00

University of Edinburgh (Scotland, United Kingdom)

June 2022

BEng in Civil and Environmental Engineering

GPA: 3.70/4.00

TECHNICAL SKILLS

Programming: MySQL/SQLite, Python, R, MATLAB, C/C++, JavaScript, MongoDB, HTML/CSS, LaTeX

Big Data Toolkits: AWS, Google Cloud Platform, Azure, Excel Analytics, Hadoop, Apache Spark, ETL, Snowflake, Seaborn, ggplot, D3.js, Power BI, Tableau, Quicksight

ML Toolkit: K-means Clustering, Linear Regression, Logistic Regression, AdaBoost, A/B Test, SVM, Decision Tree, Random Forest, PCA, ANN, CNN

Skill: Marketing Analytics, Data Modeling & Design, Data Visualization, Data Pipeline

PROJECTS

Airline Management System Database Project | *MySQL, Python, Tkinther*

Jan 2023

- Conceptualized and executed an **ERD**, showcasing expertise in advanced database design.
- Constructed a robust **MySQL Database System** to efficiently track passenger flights across a network of airports, boosting real-time operational response.
- Authored and integrated stored procedures, ensuring data precision and consistency within the airline management system.
- Cioneered a responsive front-end interface using **Python (Tkinter)**, offering users seamless access to data, simplifying operations, and facilitating advanced analytics for informed decision-making.

AI-Driven Vehicle Detection, Classification, and Tracking System | *Python, Tensor Flow API,*

Jan 2023

- Leveraged advanced computer vision techniques and deep learning, training a **YOLOv4** model for precise vehicle detection. Integrated this with the **Deep SORT** model for consistent vehicle tracking using **TensorFlow**
- Managed a dataset of 140,000+ frames, annotating 8,250+ vehicles, and 1.2 million bounding boxes through training phases.
- Analyzed model's performance under varied lighting and weather and augmentate data to boost accuracy by **20%**.

AI and Digital Twin in Structural Health Monitoring | *Python, MATLAB, Scikit Learn*

Sep 2021 - May 2022

- Utilized **ML** and **Digital Twin** techniques to pinpoint damage in bridge structures.
- Implemented an ANN, evaluating 3 classifier models to optimize structural health monitoring and minimize required training data.
- Achieved over **95%** accuracy in detecting damage location and severity with the trained machine learning model.

WORK EXPERIENCE

Grapefruit Health Illinois, USA

Data Scientist Intern

June 2023 - Aug 2023

- Processed and cleaned datasets comprising over **50,000** records of sales and patient data, enhancing data quality by **95%** using Python (**Pandas, Numpy**).
- Extracted key insights from sales and patient data, leading to actionable business decisions that potentially increased efficiency by **20%**.
- Developed interactive data visualizations using **AWS Quicksight**, which were adopted company-wide and utilized by stakeholders for better decision-making.

Institute of Civil Engineering London, UK

Analytics Intern

June 2021 - Aug 2021

- Analyzed and evaluated data from over 50 structures to recommend alternative materials, resulting in a potential **30%** reduction in carbon footprint and bringing 10 projects closer to net-zero carbon objectives.
- Collaborated with a diverse team of 25 international students, contributing to 3 major projects.