HUSSAIN Wasif Latif

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Education

The University of Hong Kong | *Bachelor of Engineering* *Sep 2021-May 2025*

- **Major:** Computer Science | **Minor:** Finance
- Awards: **Full Scholarship**
- **Roles:** HKU Student Ambassador, HKU Equal Opportunity Ambassador.
- **Highlight Courses:** Microeconomics, Macroeconomics, Analysis of Economic Data, Financial Accounting, Data Structures and Algorithms, OOP & Java, Computer Programming in C/C++, Full Stack Web-Development, Artificial Intelligence, Discrete Mathematics

Professional Experience

TCL Corporate Research LTD, *Research Intern (Artificial Intelligence)* *Apr 2023 – Present*

- **Conducted in-depth analysis** of data and results from graph neural network machine learning models related to chemical molecular prediction to derive predictions and actionable insights for enhancing further model development.
- **Developed optimized data structures** to enable the company's graph neural network machine learning model to perform dynamic material predictions efficiently. This reduced continuous model calls and minimized server overload for researchers by 40%.
- **Involved in training** of the company's current Graph Convolutional Neural networks models that are used to detect the best chemical molecules to be used in development of top-of-the-line OLED displays.
- **Implemented** Cloudflare and Nginx proxy to host the web service over a secure domain with a localized, secure server system.

Move It Move It Limited, *Artificial Intelligence (AI) Engineer* *Dec 2022 – Jan 2023*

- **Developed custom datasets** for AI Model Training using real-life images processed through Roboflow with class-based annotations.
- **Seamlessly implemented AI** using the **YoloV8 Algorithm** to train on large custom datasets for personalization of the model to furniture-detection with a 60% accuracy so far, as well as infused model modification for version storage.
- **Integrated PyTorch along with Comet AI** to store experiment models and for version control of AI model to support fine-tuning and transfer learning, hence enabling version comparisons and fluid transition between testing models.

Key Direction Limited Consultancy, *Data Analysis Intern.* *May 2022 – Aug 2022*

- **Data Analysis and Mining** for Singapore Railways LRT, to analyze maintenance of systems and handle maintenance data.
- **Designed Automation Processes** to handle large data sets and filter data into sequential storage files using Python and related libraries reducing manual data entry time by around 80%.
- **Increased website interactivity** by implementing a user connectivity dashboard using React Admin, Ant Design Pro, Bootstrap, MUI.

Highlight Projects

GPAid Alpha HKU | *Guide to HKU course selection and semester planning with AI-based GPA estimation service* *Visit Git Repo* | *Watch Demo*

- **Utilized Web Scarping with API call interceptions** to extract course review and grade data from several websites to build a large database.
- **Performed sentiment analysis** using Natural Language Processing with the Roberta Model along with nltk, huggingface transformers, and pandas data frame to produce sentiment positivity scores from student reviews for insight on course workload and attitude.
- **Constructed a regression model with numpy**, along with matplotlib to generate a grade-review-sorting factor to be used to sort courses by order of best grades, by order of best student reviews, and provide GPA estimation using regression model extrapolation.
- **Capitalized React, Chakra UI Library,** alongside ChartJs, react-paginate and ParticlesJs to make the UI more user-friendly.

ReservaCathay |A *Smart Solution to Overbooking for Cathay Hackathon 2023.* *Visit Git Repo* | *Watch Demo*

- **Employed a feed-forward neural network (MLP)** to calculate optimal overbooking ticket numbers, considering historical data and current trends.
- **Integrated GPT-4 and web-scraping** to offer personalized compensations based on customer information and preferences, enhancing individual satisfaction.
- **Established a feedback loop** for continuous improvement, utilizing customer interactions and retention data.
- **Developed** an intuitive Cathay Dashboard using Next.js, Tailwind CSS, and TypeScript for streamlined operations and data management.

Interview-Me | *A one-stop app for interview preparation & portfolio management with AI screening & feedback* *Visit Git Repo*

- **Architected an AI feedback system** to parse resume and cover letter texts to generate feedback; allow for multiple version storage.
- **Integrated a mock-interview interface** with a range of interview questions allowing video recording and response storage using AWS S3, as well as providing personalized constructive advice on the video response, movement, and posture during response capture.
- **Fine-tuned AI Model to support portfolio management** for multiple job fields along with personalized AI generated responses, as well as developed a database of specialized interview preparation kit for users to improve their interview skills.

Notable Awards and Activities

See More at: My Web Portfolio

Greater Bay Area FinTech Talent Initiative training under Goldman Sachs & Bloomberg | Among the selected 15 candidates of Goldman Sachs.

Laidlaw Scholarship 2022-2023 | Selected among top 25 researchers from 2500+ applicants from top world universities (Oxford, Leeds, etc.).

HKU Foundation Scholarship, ***Full Tuition* |** Scholarship covering Full Tuition for the entire study period.

HKU Student Ambassador (since 2021) |Represent HKU at major events, attend school visits and social activities as a representative of HKU.

Skills

Core: Python, JavaScript, Java, TypeScript, C, C++, C#, R Language, Shell (Scripting), Linux/Unix, AWS

Web App and Database: React, Vue.JS, React Native | NodeJS and Express | SQL, MongoDB, SQLite, Postgres, SQLAlchemy | Docker

Machine Learning and AI: Regression, Transfer Learning, Fine-Tuning, Computer Vision, Neural Networks

Microsoft Office: Microsoft Office, PowerPoint, Excel, Access, Data Analysis and Plotting using R-language