Hoang C **Vu**

COMPUTING · UNDERGRADUATE STUDENT

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Education

Imperial College London
London, UK

M.ENG. IN COMPUTING
Oct 2019 - Exp. Aug. 2023

- Introduction to Computer Systems, Architecture and Databases
- Discrete and Continuous Mathematics
- Graphs, Algorithms and Analysis

Concord College
Shrewsbury, UK

ADVANCED GCE LEVEL
Sep 2017 - July 2019

- A*A*A*A* in Maths, Further Maths, Chemistry and Physics A Level, Grade 2 in STEP 1 taken in first year of A Level
- Principal Award for Highest Overall Result in AS Level with an UMS of 99.6
- Second Place in Midlands Regional Heat Round for Analyst Competition (Chemistry Practical Competition)

Work Experience

Arabesque AI
London, UK

SOFTWARE ENGINEER INTERN
July 2020 - September 2020

- Led the integration of concepts of observability into legacy and new systems through the use of telemetry data
- Directly involved in redesigning and rewriting *ETL pipelines* to optimise cost to performance ratio by employing serverless architecture using mostly `Cloud Run` and `Cloud Function` services to replace high frequency `Kubernetes` cron job
- One of the main developers for transforming current system into `Infrastructure as Code (IaC)` and `Continuous Integration/Continuous Deployment (CI/CD)` for several components of the system with `Google Deployment Manager (DM)` and `GitHub actions`
- Responsible for delivering monitoring and alerts knowledge and best practices to the rest of the team
- Exposure to Machine Learning in Finance, specifically incorporating Artificial Intelligence into predicting stock market movement and portfolio customisation
- Involved with designing and managing security access for through both enforcing the use of **DM** and the use of *service accounts* appropriately

Projects

Hackathon
ICHack20

OUTING
February 2020

- Successfully built a website for organising social events for specifically small groups of friends
- Overcame a huge challenge of writing a fully functional website from scratch and integrated with some of Google's most popular APIs
- Built a fully interactive website from scratch including built-in chat window with Google NLP APIs to recognise payment, directions and location information.

ARM11 Emulator and Assembler & Extension
London, UK

END OF FIRST YEAR C-PROJECT
April 2020 - June 2020

- Worked on a group project to emulate an ARM1176JZF-S processor using C
- Responsible for researching and writing abstract data structures to best optimise performances of different components of the system
- Directly involved with the design of the game (called `Tetris Plus Plus`) including game logic and execution flow as well as mainly responsible for writing the interface for the game using `ncurses` library
- Built an Reinforcement Learning bot as an extension to `Tetris Plus Plus` using Q-Learning and integrated into 'Head2Head mode'
- Awarded the `Best Overall C Project` by the Imperial Department of Computing

Skills

Tools
Self-learn

SOFTWARZES & PROGRAMMING
Ongoing

- Languages: C, Haskell, Java, Python, SQL, x86-64 Assembler
- Web development: ReactJS, JavaScript, HTML5, DeckGL
- Cloud Computing: Google Cloud Platform, Micro-services serverless architecture, Kubernestes (*minimal experience*), Infrastructure as Code using Deployment Manager and Github Actions
- Others: OpenTelemetry, Jaeger, OpenZipkin, Prometheus