

Ka Tin Mitch Lui

Bristol, UK / Hong Kong

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Born and raised in Hong Kong, I came to the UK to pursue a career in software engineering and find my stride in an industry that is becoming more competitive.

As the son of a building consultant and a manager working in the transportation sector, I have a knack for designing systems, noticing the small details and I am a quick learner in addition to being highly adaptable in fast-paced environments.

EDUCATION

University of Bristol

BSc Computer Science | Oct 2020 to Present (Expected to graduate Jul 2023)

- 2021-2022: Received 74% in Golang coursework for writing concurrent and distributed solutions to Conway's Game of Life using channels, mutex locks (concurrent) and brokers (distributed) to split input into chunks to speed up workload by 50%
- 2020-2021: Achieved 72% in the Java Object-Oriented Programming Scotland Yard coursework for implementing a backtracking algorithm and scoring method to decide computer player moves using Google Guava's ValueGraph library

SKILLS

Languages: Python, Java, Golang, C, Haskell

Web Development Languages: HTML & CSS, JavaScript

Frameworks: FastAPI, Flask, Django, React.js, Node

Database: MySQL, mongoDB, Redis

Others: Docker, Kubernetes, Amazon Web Services, IBM Cloud

TECHNICAL WORK EXPERIENCE

Graduate Teacher

University of Bristol, UK | September 2021 - Present

Key Responsibilities:

- Hosted seminars with small groups of students covering all content from year 1, e.g. programming in C and Haskell
- Prepared for sessions by reading through worksheets and solutions every week, resulting in ability to communicate concepts and keep students engaged

Achievements:

- Nominated for the Inspiring and Innovative Teaching (Team) Award for creating an active and interactive environment inclusive of all learners by allowing space for experimentation, risk taking, and learning from making mistakes

Chatbot Developer Intern

Asiabots Limited, Hong Kong | Jun 2020 - Sep 2020, periodically throughout 2021 (Part-time basis)

Key Responsibilities:

- Collaborated with the CTO and COO to develop over 25 chatbots, voicebots and other software for a number of clients such as Cathay Pacific, AIA Insurance and DBS Bank with minimal oversight
- Devised and deployed entire backend for an admin panel with FastAPI, MySQL and AWS EC2 for client to seamlessly spend credits and generate human-like speech using typed text
- Took ownership and assisted with the migration of a dozen Python APIs from Flask to FastAPI, implemented Pydantic schemas for documentation and Redis databases for session management on multiple workers
- Performed data manipulation, transformation and filtering to increase accuracy of multi-lingual (Cantonese, English and Mandarin) natural language processing model

Achievements:

- Conceptualised and coded the infrastructure for current generation of bots to provide cross-platform and cross-media (text / audio) compatibility and client-customisable conversation flows, eliminated need for multiple repositories for individual bots
- Convinced management to begin adoption of FastAPI based on its speed improvements and ease of use in all stages of development
- Improved usage analysis tools which reduced development time and lowered operating costs by 5%

"Mitch has excellent communication skills, extremely organised, reliable and computer literate. In addition, he has displayed a maturity, motivational level, and seriousness of purpose which I have rarely encountered with college students."

Isaac Wong, COO of Asiabots Limited
Taken from reference letter (available upon request)

OTHER WORK EXPERIENCE

Student Laptop and Mobile Clinic Technician

University of Bristol, UK | September 2021 - Present

- Responsible for giving 1st and 2nd level IT support, diagnosing and solving software-related issues for students, specialising in resolving tickets involving macOS and Linux-based systems
- Gathered and documented knowledge in wiki given by senior staff In addition to personal experience from asking as many questions as possible during triage, allowing me to complete tickets more efficiently

Technical Events Officer (May 2021 - May 2022) / Vice-President (May 2022 - Present)

University of Bristol Computer Science Society, UK | May 2021 - Present

- Planned technical events roadmap such as hackathons and CTFs for the year
- Successfully organised two major events that had over 150 attendees total by meeting with sponsors and committee members regularly and using Trello for project management

ACHIEVEMENTS AND ACTIVITIES

University of Bristol CSS x Boeing Hackathon 2022

Honourable Mention | Feb 2022

- Created GreenMap, an environmentally friendly navigation platform that aggregates data from multiple transit providers such as Voi and TransportAPI to show carbon emissions for journeys to encourage more informed choices during travel
- Built using React as the frontend and FastAPI as the backend

University of Bristol BEEES Make-a-thon

Overall Best Prize, Verification / Validation Prize, Gamification Prize | April 2021

- Created a Proof-of-Concept application in Python and OpenCV for real time detection of persons wearing face coverings
- Programmed a highly accurate (99%) binary classifier model using a neural network built with Keras and Tensorflow and enabled detection of various types of masks while preventing circumvention via covering face with hands, t-shirt etc

CERTIFICATIONS

Amazon Web Services Certified Cloud Practitioner (CLF-C01)

Issued February 2021 (Score: 828/1000)

- Obtained using knowledge gained while working for Asiabots Limited developing and deploying containerised applications on Lambda and EC2 in addition to maintaining digital assets on S3
- Independently gained a deeper understanding of core AWS services, security architecture and pricing using an online learning platform

PROJECTS

University of Bristol Computer Science Society / CSS website (cssbristol.co.uk)

In development | May 2022

- Assisting in the design refresh of the CSS website to include new webstore and sponsorship admin panel using Gatsby and FastAPI

Personal website (mitchlui.dev)

In development | March 2022

- Created a static website in React to practice frontend programming skills and showcase personal projects
- Currently planning to create a blog to demonstrate projects in more detail

LANGUAGES

English (IELTS: 8.0 / Fluent)

Cantonese (Native)

Mandarin (PSC: 3A / Fluent)

French (DELF: A2 / Basic)