

Guolin Yang

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📁 PROFESSIONAL EXPERIENCE

- TikTok, Software Engineer** Sep 2023 – Present | London, UK
- Bloomberg, Software Engineering Intern** Apr 2022 – Sep 2022 | London, UK
- Optimised market data ingress using multi-way partitioning algorithms developed in Python and load-balancing ~100 machines, reducing the load on machines by up to 45%.
 - Automated the continual analysis of historical data to enable the team to swiftly adapt to market changes.
- Imperial College Business School, Software Engineering Intern** Jul 2021 – Aug 2021 | London, UK
- Worked full stack, developing a system to connect tutors with 1000's of MBA students from around the world.
 - Implemented a Python chat-bot using the MS Bot Framework SDK, MS Graph API and MS Azure.

🎓 EDUCATION

- Imperial College London, MEng Computing** ☑ Oct 2019 – Jul 2023 | London, UK
- First Class Honours
- Thesis:** Synthetic Data Augmentation to Improve Leaflet-Level Ash Dieback Detection
- Relevant Modules:** Algorithm Design and Analysis, Models of Computation, Mathematics II: Probability and Statistics, Computational Techniques, Computer Vision, Introduction to Machine Learning, Robotics, Theory and Practice of Concurrent Programming
- Brighton, Hove & Sussex Sixth Form College (BHASVIC)** ☑ Sep 2017 – Jun 2019 | Brighton, UK
- Mathematics (A*), Further Mathematics (A*), Computer Science (A), Physics (A)

📁 PROJECTS

- Ash Dieback Detection, Python** Jan 2023 – Jun 2023
- Augment limited real datasets with synthetic data generated by conditional Generative Adversarial Networks
 - Train object detection models such as YOLO and ResNets to process videos of ash trees to detect symptoms of ash dieback
- Cryptic Crossword Solver, Python, Django, NextJS, React** ☑ Oct 2021 – Jan 2022
- Combined two cryptic crossword solvers together with a React frontend featuring a plethora of additional tools such as auto-solving and hinting.
 - Improved usability by implementing an image recognition feature, using OpenCV, to allow users to upload their own crosswords from a picture.
- A Really Smart Food App, Python, NextJS, React, Heroku, Git** ☑ Jun 2021 – Jul 2021
- Conceptualized and built a recipe website which resulted in a 30% reduction in food waste in testing.
 - Employed the use of rapid iteration development, based on feedback from stakeholders, with a focus on human-centered design.
- WACC, Scala, ScalaFX, Git** Jan 2021 – Mar 2021
- Built a compiler to translate the made up WACC programming language to ARM64 in Scala.
 - Extended project by developing an IDE, with syntax highlighting, using ScalaFX and implemented compilation to x86-64.
- Pintos, C, Git, Valgrind, Make** Oct 2020 – Dec 2020
- Built a simple operating system from a bare bones framework, with a focus on concurrency and memory management.
 - Implemented kernel threads, scheduler, loading and running user programs, and virtual memory.
- ARM11 Group Project, C, Git, Valgrind, Make** May 2020 – Jun 2020
- Implemented an ARM11 assembler and emulator tested with a memory leak checker and unit tests.
 - Built an audio spectrum visualiser using FFTW and SDL which could be displayed on an LED matrix with a Raspberry Pi, as an extension.

⚙️ SKILLS

Programming Languages: Golang, Python, Java, Haskell, C/C++, Javascript and React, HTML/CSS, SQL, Scala, Groovy

Tools and Technologies: Git, Linux, JUnit, Pytest, JavaFX, ScalaFX, MS Azure, MS Bot Framework SDK, MS Graph API, Make, Jenkins, Redis, Humio, Grafana, Kubernetes, Docker

Languages: English, Cantonese, Mandarin