

EDUCATION

- M.Eng. in Computing** **Imperial College London, U.K.** **Oct 2016 – Jun 2020**
- **Attainment:** 85%. Expected to graduate with First-Class honours.
 - **G-Research Ltd. Prize** (2018, 2019). Awarded to the top 3 students per cohort for academic excellence.
 - **Undergraduate Teaching Assistant** (2018-Present). Delivering weekly logic/algorithms tutorials to first year students.

SKILLS

- **Languages:** Python, TypeScript, JavaScript, Java, C++, C, SQL, Bash, HTML/CSS; (*familiar*) Swift, Haskell
- **Tools:** Git, Travis CI, AWS (Amazon Web Services), React.js, Express.js, Flask, unittest (Python), JUnit (Java)

EMPLOYMENT

- Software Engineer Industrial Placement** **Bloomberg L.P., U.K.** **Apr 2019 – Sep 2019**
- Project: Feed Handler Code Generator - a tool that compiles high-level Feed Descriptions into C++ source code for standards-compliant Feed Handlers, which reduces the time to write/migrate Feed Handlers by up to 3 days.
- Spearheaded migration to a Python codebase for leveraging Jinja (templating engine) to decouple templates from logic.
 - Presented to developers and managers in London and New York offices; received the go-ahead and built upon feedback.
 - Collaborated with Feed Developers to pilot the tool for the TASE (Tel-Aviv Stock Exchange) Feed Handler project.
 - Designed a modular mechanism for incremental code generation to provide a flexible user experience for developers.
 - Proactively took part in training courses to learn about new technologies and their roles in other parts of the company.
 - Optimised the generated code to use C++ move semantics for decoding messages to reduce latency.
 - Leveraged knowledge in Python (data model, metaprogramming), C++ and API design.

SOFTWARE PROJECTS

- Airline Food Waste Tracking System – Singapore Airlines (SIA)** **Jan 2019 – Apr 2019**
- A proof of concept for SIA's catering service provider (SATS Ltd.), tested on-site in Singapore.
- Trained and deployed an object detection model on AWS SageMaker for recognising food items from SIA in-flight meals.
 - Tackled scalability concerns to support the volume of SIA flights by building APIs as stateless functions on AWS Lambda.
 - Overcame the challenges of remote collaboration (with Business Unit mentors and other teammates residing in Asia) through using Trello and Slack for project management to complete the software project within the 10-week timeline.
 - Utilised: JavaScript, AWS (Lambda, API Gateway, SageMaker, DynamoDB), Travis CI (continuous integration)

- Aspect-Based Sentiment Analysis Platform – Goldman Sachs (GS)** **Oct 2018 – Jan 2019**
- A solution for parsing sentiment insights from news documents for the GS Asset Management Team.
- Researched and implemented a rule-based approach for extracting entity-attribute pairs based on part-of-speech tags.
 - Learned React.js to build a tool for tagging entity-attribute pairs in documents to generate training data for my team.
 - Utilised: Python, Flask, spaCy (natural language processing library), React.js, Git

- Integrated Development Environment (IDE) for a small While language** **Dec 2017**
- A graphical IDE for a small While language with syntax highlighting and code completion using its compiler as a service.
- Implemented an emulator and debugger based on traversing the abstract syntax tree using the Visitor design pattern.
 - Utilised: Java (object-oriented programming), ANTLR (parse tree generator), Java Swing (GUI framework)

ADDITIONAL AWARDS

- **IC Hack 19 VISA Most Ethical/For-Good Hack** (2019). Built an iOS app to empower visually impaired users to shop abroad by identifying items through the camera using computer vision and dictating their names and prices (in home currency).
- **SIA AppChallenge Open Category 2nd Place** (2018). Participated as one of 1,500+ teams from 70+ countries.

PUBLICATIONS

- Miu A, Ferreira F, Yoshida N, Zhou F, **Generating Interactive WebSocket Applications in TypeScript**, *Electronic Proceedings in Theoretical Computer Science*, Vol:314, Pages:12-22.