# Ma Wing Kin, Paul

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## EDUCATION

- **City University of Hong Kong** — Hong Kong
  *Bachelor of Science in Computer Science, Expected Graduation Date: 06/2023* — *Sep 2019 – Present*

## EXPERIENCE

- **GoGoX (GoGoVan)** — Hong Kong
  *Software Engineer, Part-time* — *Sep 2022 – Mar 2023*
  - Set up the design system in Flutter, provided features like Dark Mode and application for widget Showcase. Also added a CI/CD workflow with Codemagic, included deployment in App Distribution and CI build for pull requests
  - Created a Flutter plugin that support per-app language preference with platform-specific code in Swift and Kotlin
  - Increased >15% test coverage in Flutter app. Optimized logging with Crashlytics and Performance Monitoring
  - Used React Flow to modify workflow transitions in the admin portal, and Dagre to display graphs with auto layout
- **GoGoX (GoGoVan)** — Hong Kong
  *Software Engineer, Intern* — *Jun 2022 – Aug 2022*
  - Added >10 database models in the admin portal. Created APIs and unit tests in the backend with NestJS and Typescript. Integrated them in the frontend using React, Next.js, RTK Query, React Hook Form and JOI
  - Developed a MVP in Flutter for tracking online orders which integrated Firebase and Google Sign In
  - Exported designs automatically with Style Dictionary to solve the incompatibility between Figma and Flutter
- **Hospital Authority** — Hong Kong
  *Programmer, Intern* — *Jul 2021 – May 2022*
  - Developed an internal tool that supported several file formats to find matching IP addresses using Python
  - Exported data to the desired format and performed data visualization with Pandas and Openpyxl
  - Set up daily Cron jobs for Email automation and website monitoring with Github Actions and Python

## PROJECTS

- **Final Year Project | Python, Tensorflow**
  - Applied Naive Bayes, SVM and BERT to predict the sentiment, the best model achieves an accuracy of $\sim$0.6
  - Used ARIMA and LSTM for time series forecasting, and employed predicted sentiment as the exogenous variable
- **Distributed Accounting System | Spring Security, Spring Cloud Gateway, RabbitMQ**
  - Set up the architecture containing a gateway to load balance and route requests, and a message queue to distribute requests to multiple servers. Integrated Spring Security with JWT for authentication across the entire system
  - Configured producers and consumers in RabbitMQ, applied Request-Reply pattern to consume response in client
- **CityU Downloader | Docker, Redis, PostgreSQL, Spring Boot**
  - Supported searching examination papers by every combination of course name/year/subject, which saved more than half the steps required to download each CityU examination paper. All responses were cached with Redis
  - Created integration tests in Spring boot backend with PostgreSQL and Redis containers, had >90% test coverage
- **Personal Website | AWS, Github Actions, Terraform**
  - Utilized Terraform to define infrastructure, applied changes in resources automatically with a CI/CD pipeline
  - Served the website with S3 and CloudFront, used API Gateway, Lambda and DynamoDB for a visitor count API

## PROGRAMMING SKILLS

- **Languages**: C++, Dart, Java, Javascript, Python, SQL, Typescript
- **Technologies**: AWS, Docker, Firebase, Flutter, Github Actions, MongoDB, NestJS, Next.js, Nginx, PostgreSQL, RabbitMQ, React, Redis, Spring Boot, Terraform

## ACHIEVEMENTS

- 1 Kyu on Codewars, ranked top 100 for kata completed, solved 1900+ problems
- Completed Advent of Code 2021 and 2022, placed top 100 in several days
- Represented Hong Kong in 2017 CCGS SEA, a Clash Royale tournament, won 1500 USD