

# Joshua Ong

+65 9830 5593 | [oypjoshua@gmail.com](mailto:oypjoshua@gmail.com) | [linkedin.com/in/oypjoshua](https://www.linkedin.com/in/oypjoshua) | [github.com/oypjoshua](https://github.com/oypjoshua) | **H1B1 Visa Eligible**

## EDUCATION

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### National University of Singapore

*Masters of Science (Mathematics)*

Singapore

Aug. 2019 – May 2021

### National University of Singapore

*Bachelors of Science (Mathematics)*

Singapore

Aug. 2013 – May 2016

## EXPERIENCE

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### Technical Lead

*ASUS (AI Division - Platform)*

Jan. 2024 – Present

*Singapore*

- Architected and implemented AI SaaS services for XHIS, an integrated hospital system deployed across Taiwan, featuring advanced ICD and drug search, as well as recommendation functions.
- Utilized FlexSearch, Elasticsearch, and recommendation algorithms to deliver over 90% monthly user satisfaction, handling up to 100,000 searches per month.
- Led a team of 5 engineers to successfully execute cloud migration of mission-critical AI services from Azure to GCP within 2 months.

### Software Development Engineer

*ASUS (AI Division - Blade)*

Feb. 2022 – Jan. 2024

*Singapore*

- Built a computer vision Software-as-a-Service, assisting doctors across Singapore with blood film analysis.
- Built a webapp with a Vue.js frontend, FastAPI backend, and containerized deployment using Kubernetes to reduce time spent per slide by 50% and increase throughput by 300%.
- Engineered, trained, and deployed Blade's Platelet detection feature using YOLOv5, achieving a model mAP of 92%, with 50,000 MAR and 88% monthly satisfied users.
- Led all software-related efforts to obtain ISO 13485 certification for Blade, including authoring comprehensive documentation and defending the product during auditor evaluations.

### Operations Analyst

*Nomura Singapore Limited*

Dec 2018 – May 2019

*Singapore*

- Liaised with Operation groups to ensure proper settlement and trade resolution.
- Executed daily Profit & Loss and Risk tie outs to ensure market integrity.

### Trade Control Analyst

*Standard Chartered Bank*

Aug 2016 – Dec 2018

*Singapore*

- Assisted front office with trade support across fixed income.
- Mentored new staff on daily functions and overview of collateral processes.

## PROJECTS AND PAPERS

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### Research Paper | *Co-Author*

Sep. 2023

- Co-authored the research paper titled "Artificial Intelligence-Generated Peripheral Blood Film Images Using Generative Adversarial Networks and Diffusion Models".
- DOI: 10.1002/ajh.27018

### Mask Detection | *Python, OpenCV, TensorFlow, PostgreSQL, DenseNet-201*

May 2021 – July 2021

- Trained a highly accurate classifier to predict if a person is wearing a mask, achieving 99.5% accuracy.
- Engineered and deployed a live face mask detection system using OpenCV with high precision.

## TECHNICAL SKILLS

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**Languages:** Python, TypeScript, JavaScript, HTML/CSS, SQL (Postgres), KQL

**Frameworks:** VueJs, Flask, FastAPI, TensorFlow, Selenium, PyTest

**Developer Tools:** Git, Docker, Kubernetes (K8s), Helm, Azure Cloud Service, Google Cloud Platform (GCP), Postman, Swagger, Power BI, Grafana, Application Insights

**CI/CD Tools:** Azure DevOps, TravisCI, SonarQube

**Databases:** PostgreSQL, MongoDB