

# Resume

## Michael Kang

**LinkedIn:** <https://www.linkedin.com/in/michael-k>

**Email:** [xtde8in7o@relay.firefox.com](mailto:xtde8in7o@relay.firefox.com)

**Portfolio Website:** <https://onepersonhere.live/>

**Phone:** +65-XXXX-XXXX

**GitHub:** <https://github.com/onepersonhere>

### WORK EXPERIENCE

#### **BINANCE, ML ENGINEER**

May 2024 – Current

- Log anomaly keyword extraction using Tensorflow, keras as well as Apache Spark, Lucene, Nutch & Solr.
- Constructed multilevel topology graph for link anomaly detection
- Logs extraction using Elasticsearch, Logstash, Kibana and Datadog.
- Fixed anomaly forecast prediction algorithm and improved efficiency on anomaly alert latency.

#### **BINANCE, FULL STACK SOFTWARE ENGINEER**

Jan 2023 – Jul 2023

- Involved in front-end and back-end development of incident reporting model and algorithm platform, using React JS, NextJS and Java Spring Boot.
- Project manager and backend developer for Air Classroom app.
- Involved in designing MySQL database and maintaining Google Cloud Platform for back-end API development.

#### **NATIONAL UNIVERSITY OF SINGAPORE (NUS), TEACHING ASSISTANT, ORBITAL 2023, ORBITAL 2024**

Apr 23&24 – Aug 23&24

- Primary academic advisor for 12-15 teams on Software Architecture, Software Engineering principles and practices.

#### **NUSSU COMMIT, VICE PRESIDENT**

Jun 2022 – Jun 2024

- In charge of maintaining/debugging NUS computers and cloud-based virtual machines.

#### **NUS ORBITAL 2022 (ARTEMIS), NATIONAL UNIVERSITY OF SINGAPORE**

Apr 2022 – Jul 2022

- Main contributor with 200k lines of code, did Code Quality checks, automated test cases, CI/CD using custom GitHub Actions.
- NFT/Cloud-based, multi-platform, Open World RPG game.
- Hardest difficulty achieved by fulfilling extreme requirements in software engineering skills, such as Object-Oriented Programming (OOP) through game development and peer programming.
- Link (to documentation): <https://tinyurl.com/2u6hww74>

#### **SIGNAL OPERATOR, SATCOMS, SINGAPORE ARMED FORCES**

2019 – 2021

- Trained as Cisco Certified Network Associate (CCNA)
- Awarded best signal operator based on exemplary performance in CCNA.

### EDUCATION

#### **BACHELOR OF COMPUTING (COMPUTER SCIENCE) (HONOURS), NATIONAL UNIVERSITY OF SINGAPORE**

Aug 2021 – Jun 2025

- Second Major in Quantitative Finance.
- Specialization in Artificial Intelligence
- Specialization in Networking and Distributed Systems
- Relevant courses:
  - Artificial Intelligence and Machine Learning (CS2109S),
  - Probability and Statistics (ST2334),
  - Operating Systems (CS2106),
  - Computing for Quantitative Finance (QF2103),
  - Advanced Mathematics in Quantitative Finance (QF3103),
  - Software Engineering (CS2103T),
  - Advanced Technology Attachment Programme (CP3880),
  - Computer Vision (CS4243)

#### **AUTUMN EXCHANGE, UNIVERSITY OF OSLO**

Aug 2023 – Dec 2023

- Relevant courses:
  - Natural Language Processing (IN4080),
  - Algorithms: Design and Efficiency (IN3130)

#### **STANFORD CODE IN PLACE**

Apr 2020 – Jun 2020

### PERSONAL PROJECTS

#### **@cs\_notes\_bot**

- Telegram Bot that provides users with a cloud-based storage.
- It is based on NodeJS and JavaScript, hosted on Firebase.
- Link: [https://t.me/cs\\_notes\\_bot](https://t.me/cs_notes_bot)

#### **Stock Analyzer**

- Scraped real-time financial data from Yahoo Finance & Finviz to test trading & investment strategies.
- Statistical analysis for individual stock using Python, Numpy, Pandas, Scipy.
- Generate the Mean-Variance portfolio, the efficient portfolio frontier using matplotlib together with the tangent portfolio.

- Calculates the implied volatility of stocks using the Black-Scholes-Merton formula.
- Generates the Merton-Jump-Diffusion model.

#### Blockchain

- Project based on JetBrains Academy's Blockchain project.
- Applied hashing, multithreading skills and serialization skills in Java.
- Link: <https://github.com/onepersonhere/Blockchain>

#### visual.ai

- Project made for TikTok TechJam 2024
- Visualizes Deep Neural Network models during training.
- Link: <https://github.com/visual-ai-org/visual-ai>

## SKILLS SUMMARY

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#### Programming Languages

- (Expert) Java, Python
- (Intermediate) JavaScript, C++
- (Beginner) Bash/Shell, C, Assembly

#### Frameworks

- (Intermediate) JavaFX, Spring Boot, Swing, Flask, NodeJS, NextJS

#### Testing

- (Intermediate) JUnit

#### Database

- (Advanced) Firebase, Google Cloud, MySQL

## HACKATHONS

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#### NUS-NCS Innovation Challenge, NUS Business Analytics Centre

Mar 2024

- Led the team in creating a chat bot based on ChatGPT's OpenAI model using Natural Language Processing (NLP) and Machine Learning (ML) approaches.
- Backend was done using Python, Frontend was done using Flask.
- Data processing and annotation on both real-time and static data using Python.

#### SNOMED CT Entity Linking Challenge

Feb 2024

- Link spans of text in clinical notes to concepts in the SNOMED CT clinical terminology.

#### 9<sup>th</sup> Engineering Innovation Challenge

- Finalist
- Main engineer for computer vision – object identification for the leaves and tracks its growth using opencv.
- Code: [https://github.com/onepersonhere/AgriVision\\_CV](https://github.com/onepersonhere/AgriVision_CV)

#### WelcomeCTF, NUS Greyhats

Jul 2022

- First Place among 133 teams.