

KHOA LE

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A T-shaped software engineer with over 5 years of experience focused on back-end with a strong DevOps mindset. Able to work across the tech stack to ship a full product to users.

SKILLS

Technical Skills

- Proficient in different languages like Python, JavaScript and C++ with a love for functional programming. Ability to write clean and maintainable code.
- Hands-on experience with frontend technologies including HTML, React, Vue.
- Experienced in data analysis and machine learning using Python.
- Solid software engineering skill, design patterns, test-driven development, event sourcing.
- Familiar with both relational SQL and NoSQL databases.
- Experienced with UNIX/Linux environments, strong Bash shell-scripting skill.
- Practical experience with managing cloud-native infrastructure on AWS, infrastructure-as-code using Terraform, and working with Docker.
- Proficient in various tooling: Git, GitHub, Jenkins, CircleCI, JIRA.

Personal Skills

- Strong desire to learn; continuously dwell on new skills and toolsets. Always strive to understand how things work and experiment new ideas.
 - Obsessed with automation and regularly seek ways to be more efficient.
 - Solid problem solving and critical thinking skills.
 - Maintain a well balance between designing long lasting software and getting things done.
 - A collaborative and delightful team player with a love to share knowledge with others, while being able to work independently at the same time.
 - Passionate about DevOps and embracing its philosophy to improve the cadence.
 - Experienced in working with clients, stakeholders and people across different teams.
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PROFESSIONAL EXPERIENCES

Software Engineer

Plexus

🌐 Melbourne

Core Engineering team

01/2020 – Current

- Worked in a cross-functional Agile team for our core SaaS product Plexus Gateway. Collaborated closely with product managers and designers to build & ship new features with substantial impact to users and a great focus on UI/UX.
- Actively participated in technical design discussions, code reviews and pair programming.
- Worked on various features across the stack from the React frontend, legacy Django monolith backend, to newer APIs and services following serverless architecture on AWS Lambda and other AWS components such as S3, DynamoDB, CloudFront, SQS.
- Worked on integration with 3rd-party services including Auth0, DocuSign, Salesforce.
- Advocated for adoption of new technologies to solve complex problems faced by the team.
- Started several initiatives to improve various DevOps aspects. For example, migrated some of our apps to Docker to standardise the environments; optimised the build process to reduce deployment time by nearly 50%.

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- Managed and automated our infrastructure hosted on Heroku, AWS and Cloudflare.

App Development team

01/2019 – 12/2019

- Became the first software engineer of the App Dev team responsible for building new-generation bespoke web apps for our clients using VueJS. These apps extend the core Plexus Gateway with more customisation and automation capability.
- Participated in the full project lifecycle from technical requirement analysis, cost estimation, project proposal, to development and release.
- Continuously made suggestions to improve the way the team operates, resulted in reduced frictions between developers, project managers and stakeholders.
- Provided helps to more junior team members. Managed our newly founded offshore team.
- Established the foundation for the new codebase with coding best practices, CI/CD pipeline. Built out a common library with reusable components shared by the apps.
- Laid the foundation for our app automation initiative, where we automated the process of building new apps for clients, cutting average delivery time from a week to just over a day.

Summer Research Intern

CSIRO-Data61

 Melbourne

11/2016 – 02/2017

- Carried out a research project into the topic of mining students' work logs to perform formative assessment of the students' performance in a software engineering team project.
- Evaluated various textual analysis and machine learning techniques to develop a predictive model for grading students.
- Implemented a prototype in Python using NLTK and Scikit-learn.
- Published a [conference paper](#) for the 2017 Asia-Pacific Software Engineering Conference Workshops.

Software Engineer

Bank of America Merrill Lynch

 Singapore

Foreign-Exchange Trading Platform team

07/2013 – 07/2016

- Worked in an Agile team for InstinctFX – a global electronic FX algorithmic trading platform. A distributed system designed with high performance, scalability and low latency.
- Contributed to the development of multiple server-side services for pricing, trade booking and processing using C++11 with STL and Boost on RHEL Linux.
- Managed the continuous integration workflow, improved Jenkins builds, automated test reporting with historical result.
- Maintained our in-house regression testing framework and improved its reliability.

Management Information System project

07/2014 – 07/2016

- Responsible for the design and development of a real-time data analytical system for the Singapore team that enables our traders to monitor the current market and trading activities.
- Worked closely with users to understand the domain knowledge and their needs.
- Created various in-depth reports with using our proprietary Python framework. Developed models and complex queries for our time-series data stored in KDB.
- Integrated the system with the InstinctFX platform via custom-built APIs and high-throughput data feeds using AMPS message queues.
- Refactored existing system to improve performance and reliability: reduced report load time, optimised KDB queries to handle large datasets, prevented out-of-memory crashes, made job scheduling more reliable and fault tolerant.

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Summer Intern

Bank of America Merrill Lynch

 Singapore

05/2012 – 08/2012

- Created a command-line C++ tool for on-demand database replication and backup.
- Built a web dashboard to centralise monitoring of our test environments and allow the team to easily control all the QA servers in one place.

Part-Time Developer

Earth Observatory of Singapore

 Singapore

01/2012 – 05/2012

- Developed user interface for data querying and visualisation of volcanoes on a PHP web application with jQuery.

Industrial Placement

Bank of America Merrill Lynch

 Singapore

07/2011 – 12/2011

- Participated in the development of a CRM web app using Java EE and Spring framework.

EDUCATION

Master of Information Technology (Professional Computing)

Swinburne University of Technology

 Melbourne

08/2016 – 08/2018

Specialised in Mobile and Cloud Computing

Bachelor of Engineering

Nanyang Technological University

 Singapore

08/2009 – 06/2013

Major in Computer Engineering

PROJECTS

Hate speech detection on Twitter

Applied research project for Master of Information Technology

- Worked in a team of 5 to research and develop a web-based visualisation software to detect hate speech on Twitter with the ability to derive demographic information from the tweets.
- Developed the backend in Python – a Flask app backed by MongoDB. The server monitors and processes stream of tweets in real time, it integrates with the frontend using REST API.
- Implemented sentiment analysis using Naïve Bayes classification.
- Testing, building and deployment were automated with CodeShip and Heroku.

Research on computational finance using machine learning

Final-year project for Bachelor of Computer Engineering

- Studied the theories of machine learning and their applications to stock prediction.
- Developed a machine learning model using Support Vector Machine.
- A prototype was implemented in C++ with maximum prediction accuracy of 75%.

HOBBIES

- Rock climbing, trekking
- Photography
- Woodworking
- Yoga