KHOA LE

✉ ltkhoa2711@gmail.com   ☎ (+61) 410 262 017   📍Melbourne, VIC
in https://linkedin.com/in/letankhoa   🔗 https://github.com/tkhoa2711

A recent Masters graduate with over 3 years of hands-on experience in the industry.
Currently looking for a permanent opportunity to tackle new challenges.

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

PROFESSIONAL EXPERIENCES

Summer Research Intern
CSIRO-Data61   🌐 Melbourne   11/2016 – 02/2017

- Performed a research project into the topic of mining work logs to perform formative assessment of students' performance in a software engineering team project.
- Utilised text analysis and machine learning techniques to develop a predictive model for grading students.
- Implemented a prototype in Python with NLTK and Scikit-learn.
- The project was put into practice at Swinburne university for the Software Engineering Project unit and a conference paper was also published as a result.

Software Engineer
Bank of America Merrill Lynch   🌐 Singapore   07/2013 – 07/2016

Foreign-Exchange Trading Platform:
- Worked in an Agile team that developed multiple server-side components for InstinctFX. It is a global distributed FX algorithmic trading platform that is highly scalable and low latent.
- Developed new server-side features using C++ with STL and Boost in Linux environment; occasional support for the Java client-side app.
- Managed the team's continuous integration workflow by automating build and deployment with Jenkins.
- Maintained the in-house XML-based regression-testing framework built completely in C++.
- Drove the team to follow test-driven development process.
- Took part in support roster to diagnosed and debugged any errors in production.
- Kept documentation up to date by regularly updating the architectural system designs, business logic and technical details on our Confluence wiki page.

Management Information System project:
- Responsible for the design and development of real-time data analytical system for the Singapore team that enables our traders to monitor the current market and trading activity.
- Worked closely with internal users to gather requirements and support them throughout production usage.
- Created rich-information UI with graphs, charts, tables using proprietary Python framework.
- Developed data model and management strategies for time-series data with KDB.
- Integrated the system with our FX trading platform via custom APIs and message queues.
- Refactored existing system to improve performance and reliability.

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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 dashboard web page to display live status of our testing. It helps to simplify the monitoring of our QA environments.

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 front-end development of a CRM web portal using Java EE and Spring framework.

SKILLS

Technical Skills
- Hands-on programming experience with C++/C++11, Python, Java. Knowledgeable about functional programming and its application for writing clean code.
- Experienced in data analysis and fundamental machine learning using Python.
- Solid software engineering skill, design patterns, agile methodology, test-driven development.
- Familiar with both relational SQL and non-relational databases such as MongoDB.
- Experienced with UNIX/Linux environments, strong shell-scripting skill.
- Basic working knowledge with web technologies including HTML, JavaScript/ES6, NodeJS and modern front-end frameworks such as React.
- Familiar with cloud services such as AWS, Heroku.
- Proficient in DevOps concept and various related tools: Git for version control; Jenkins, Travis for continuous integration; JIRA, Trello for project management and issue tracking.

Personal Skills
- Creative in working and problem solving. Always strive to understand how things work and experiment new ideas.
- Strong desire to learn and self-improve; continuously dwell on new skills and toolsets.
- Great passion for technology and software crafting. My aim is to create not only beautiful software, but also those with elegant implementation and comprehensive documentation.
- A collaborative and delightful team player; while being able to work independently at the same time.
- Experienced working directly with clients, stakeholders and people from different teams globally.

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 social media with the ability to derive demographic information from the tweets.
- Developed a Python application server, which is a Flask app backed by MongoDB.
- The server monitors and processes stream of tweets in real time, it also exposes a set of RESTful API for integrating with the Angular front-end.
- Implemented sentiment analysis with Naïve Bayes classification.
- Testing, building and deployment were automated with Codeship and Heroku.

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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 model using Support Vector Machine.
- A prototype was implemented in C++ with maximum prediction accuracy of 75%.

Plug-in for Vim editor
https://github.com/tkhoa2711/vim-togglenumber

- Created a plugin for Vim that allows users to switch between numbering modes seamlessly.

Pomodoro technique with Emacs
https://github.com/tkhoa2711/pomodoro.el

- Implemented Pomodoro technique for self time management within the Emacs editor.

HOBBIES

- Rock climbing, trekking
- Photography
- Woodworking
- Yoga