Dang Le Dang Khoa

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Work Experience (selected)

Master of Engineering Candidate **Satellite Research Centre** **August 2016 - August 2018**

- Implemented a design of Star Tracking Algorithms onto a Programmable System-on-a-chip system.
- Optimized the pattern recognition algorithm runtime by implementing the connected component labeling algorithm on parallel processors. Runtime is improved 64% on average compared to traditional processor approach.
- Optimized and designed the pattern searching algorithm by applying k-ary tree data structure. Time complexity and runtime improved 31%, but space complexity and memory increased 22%.

Languages/Technologies: **C/C++, Python, Bash**
Source code: git.io/vpucY

Projects (selected)

Dota 2 Hero Recommendation

- Recommended game characters based on historical user data collected by Open Dota API.

Languages/Technologies: **Python, flask, pandas, numpy.**
Source code: git.io/fhV1q

Stock Price Predictor

- Predicted Time-series data by Linear Regression and ARIMA modeling approaches.
- Optimized Model's accuracy by 20% by performing feature engineerings and hyper-parameters optimizations.
- Evaluated and Benchmarked models based on Root Mean Squared Error Metrics.

Languages/Technologies: **Python, pandas, numpy, matplotlib, sklearn.**
Source code: git.io/vpuCA

Neighborhood Map APIs

- Built a neighborhood map based on Google Map, Wikipedia, Foursquare APIs.
- Deployed and Configured Amazon Linux servers.

Languages/Technologies: **Javascript, Flask, Ajax, jQuery, Knockout.**
Source code: git.io/fhVMf

Education

Master of Engineering **Nanyang Technological University** **August 2015 - August 2018**

- School of Electrical and Electronics Engineering - Research.
- Thesis title: Implementation of An Autonomous Star Recognition Algorithm using Hardware-Software Co-Processing Approach.

Bachelor of Engineering **Vietnam National University HCMC** **August 2010 - April 2015**

- Ho Chi Minh City University of Technology - Electrical and Electronics Engineering - Second Upper Honour
- Major in Automation and Control engineering, minor in Robotics and Embedded System Design.
- Thesis title: Applying of Fuzzy Logic Algorithm on Legged Locomotion Robot.

Certificates and Related Courseworks

- Coursera - Data Structures and Algorithms Specialization.
- Coursera - Machine Learning Specialization.
- Coursera - Big Data Essentials: HDFS, MapReduce, and Spark RDD.
- Coursera - Introduction to Deep Learning.
- Udacity - Machine Learning Engineer Nanodegree.
- Udacity - Full Stack Web Developer Nanodegree.
- MIT-6.041-Probabilistic Systems Analysis and Applied Probability
- UC Berkeley - CS162 - Operating Systems and Systems Programming
- UIUC - CS425 - Distributed Systems

Competition Achievements

- Google Code Jam 2018 - Round 2 qualifier - Top 10% Candidates