DUONG LE

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Education

University of Southern California — Los Angeles, CA
Master of Science, Computer Science — May 2020
Specialization: Intelligent Robotics GPA: 3.66

University of California Irvine — Irvine, CA
Bachelor of Science, Computer Science — June 2015
Specialization: Intelligent Systems GPA: 3.78

Technical Skills

- C++, Java, Python, MATLAB, HTML, JavaScript, CSS, MySQL, LaTeX
- Computer Vision, Image Processing, Artificial Intelligence, Machine Learning, Face Recognition, Object Detection, Robotics, Motion Planning, OpenCV, ROS, TensorFlow, MapReduce, Spark, Android, Distributed Systems, Information Retrieval Systems

Experiences

Software Developer - Research Assistant — June 2017 - August 2018
Adaptive Computation (Caltech spin-off) — San Dimas, CA
Developed and tested Facial Recognition System - *C++, Java, Python, OpenCV*

- Developed application on multiple platforms: Android, Windows, Linux, and Raspberry Pi 3
- Optimized performance: process 100+ full HD images/second for a single core Raspberry Pi 3
- Built testing mechanism with *The MegaFace Benchmark*: 1 Million Faces for Recognition at Scale - 672k identities from 4.7 million images

Software Developer - Research Assistant — October 2015 - June 2017
NeuralEye (Caltech spin-off) — Glendora, CA
Designed, developed, and optimized Facial Recognition System - *C++, OpenCV, Java, Android, MATLAB*

- Developed applications for Android and Intel Recon Jet Smart Glasses
- Implemented testing mechanism for internal database: 200+ identities from 10k+ images
- Analyzed testing results, optimized speed performance and fine-tuned algorithm
- Researched and developed a new technique to handle varying illumination in input images

C++ Lab Tutor — January 2015 - June 2015
University of California Irvine — Irvine, CA
Tutored courses: Programming in C/C++; Advanced Programming and Problem Solving with C++

Math Tutor — Sep 2012 - May 2013
Pasadena City College — Pasadena, CA
Tutored Calculus, and Linear Algebra

Projects

- **Self-driving RC car**: using Raspberry Pi 3 and Pi camera to control the car - car autonomously runs and keeps in its lane, stops when detecting obstacles ahead. In process: detecting stop signs, traffic lights, and crosswalks. *(C++, Python, OpenCV, TensorFlow, ROS)*
- **Warehouse Robot**: wheel robot A delivers a cup to robot arm B to put on a shelf. A must localize itself in a maze, plan a path to B. B must plan to grasp the cup by its side from A, and move it to the shelf keeping it upright. *(Python, ROS, Localization, Planning)*
- **Weather Prediction**: using UCI weather database - result got 70% correction by using Random Forest, Decision Tree, and Naïve Bayes. *(C++, MATLAB, Machine Learning)*
- **Robotics Techniques**: experienced with Bayesian Filter, Kalman Filter, EKF, Particle Filter; Localization, Mapping and SLAM; Sampling-based Motion Planning, Constraint-based Planning *(Python, ROS)*
- **Image Processing Techniques**: experienced with digit classification, frequency analysis, aliment, texture synthesis, and object detection. *(C++, MATLAB, OpenCV)*

Publication

T. A. Duong, N. Duong, and D. Le. Integration of bio-inspired, control-based visual and olfactory data for the detection of an elusive target. *AIP Conference Proceedings*, 1798(1):020051, 2017

Honors - Awards

- Dean's Honor List, University of California, Irvine: Fall 2013, Winter 2014, Spring 2014, Fall 2014, Winter 2015
- Dean's Honor List, Pasadena City College: Fall 2010, Spring 2011, Fall 2011, Spring 2012
- Third place in Programming Challenges for high school programmers, Vietnam 2006
- Bronze Medal in programming, Olympic 4/30 Competition for high school students, Vietnam 2006
- Silver Medal in programming, Olympic 4/30 Competition for high school students, Vietnam 2005