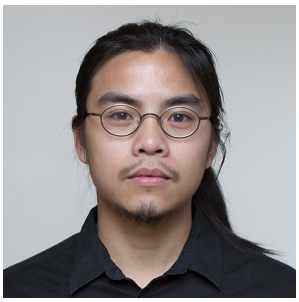
Anthony Tri Phap Nguyen

based in: San Francisco – Stockholm – Frankfurt

+1(662) 219 9496 • mail@atwing.net • www.atwing.net • atwing
atwing



Education

KTH Royal Institute of Technology — **Stockholm, Sweden**
M.Sc. in Machine Learning — Aug 2016 - June 2018 (expected)

Darmstadt University of Applied Sciences — **Darmstadt, Germany**
B.Eng. in Electrical Engineering, GPA: 3.6 — Sep 2012 - Mar 2016
Concentration: Telecommunications Engineering

Personal Projects

Speech Analyser: Implemented in MATLAB. Using short-time Fourier transform, autocorrelation, ZCR and energy-based learning to distinguish between utterances & breaks, voiced & voiceless consonants, gender & approx. age of speaker.

Surveillance System: Homemade multi-camera system using Raspberry Pis. Features include communication to network for web streaming and remote control via VNC.

Voice Controlled Home Automation: Bash shell scripting, Python. Build a digital assistant on a single-board computer to voice control computers, home devices, lights and execute shell scripts. Triggered by a Bluetooth remote for privacy protection.

Related Coursework

Deep Neural Networks: Used multilayer ConvNets with BackProp, ReLU and max pooling to classify images in CIFAR-10 dataset. Written in MATLAB.

AI in Gaming: Used heuristic functions, alpha-beta pruning and HMMs to create an AI bot able to play games such as 3D Tic-Tac-Toe, Checkers and Duck Hunt. Written in C++.

Itinerary Planner: Used PDDL to automatically construct an travel plan given the customers interests in an area featuring public transport systems and tourist attractions.

Data Collection in Speech Technology: Generated new speech samples based on Spontal dataset using Shadowing and other respeaking methods. Methods evaluated on Amazon Mechanical Turk.

Simple Image Classifier: Implemented AdaBoost, Bayes Classifier, Support Vector Machines to classify images and decipher hand writing.

Basic Image Analyser: Implemented Hough Transform, K-means clustering, graph cuts for image feature detection and segmentation.

Artificial Neural Networks: Implemented simple ANNs of types Back-prop, Hopfield, RBF and SOM for optimization, classification, diagnosis.

Experience

Darmstadt UAS — **Darmstadt, Germany**
DSP Engineer — Apr 2016 - Aug 2016
Implemented a voice pitch analyser that measures and returns the pitch and range of a speaker using a Raspberry Pi. Implementation in C.

Ngee Ann Polytechnic **Singapore**
DSP Engineering Intern Aug 2015 - Feb 2016
Implemented a Recursive least squares filter on a real-time digital signal processor which adaptively reduces noise in audio signals. On-board implementation in C, filter simulation in MATLAB

Darmstadt UAS **Darmstadt, Germany**
Teaching Assistant Mar 2015 - June 2015
Programmed the FPGA of a Zedboard to control onboard LEDs & buttons and simulate traffic lights. Implemented in VHDL and Simulink.

Darmstadt UAS **Darmstadt, Germany**
Teaching Assistant Apr 2014 - Feb 2015
Held various weekly seminars for courses in: simulation of technical systems using MATLAB, microprocessor technology, measurement technology, signal processing, design of digital systems

Technical Skills

Programming Languages: C/C++, MATLAB, Python, JAVA, VHDL, SQL, ASM Language

Others: Git, Linux/Unix, OSX, Windows, LaTeX, Slack

Interests & Others

Languages: German (mother tongue), Vietnamese (mother tongue), English (excellent), Russian (basic), Swedish (basic)

Assistant Manager: worked in a family business (supermarket) from childhood on. Tasks include technical administration, inventory management and PR.

Community Service: Supervisor at a diaconia in Nieder-Ramstadt. Department: Electrical Assembly

Scholarship: 18 month scholarship from Anna Ruths-Stiftung for master studies at KTH.