Thomas Huang

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Summary

Self-directed college junior with interest in machine learning looking for internship opportunities during the summer.

Education

University of Michigan, Ann Arbor
Bachelor of Science in Engineering, Computer Science Expected in April 2019

- Cumulative GPA: 3.98/4.0
- Relevant Courses: Machine Learning, Reinforcement Learning, Computer Vision, Web Systems, Artificial Intelligence, Operating Systems, Data Structures and Algorithms, Discrete Mathematics, Linear Algebra

Research Experience

Professor Honglak Lee's Research Group, University of Michigan – Ann Arbor
Research Assistant April 2018 - Current
Researching deep learning for perception and reasoning.

ARM Lab, University of Michigan – Ann Arbor
Research Assistant January 2018 - April 2018
Researched the use of deep learning models for 3D shape completion from a single depth view.

Biomimetic Intelligent Mechatronics Laboratory, **Ritsumeikan University** – Japan
Research Assistant May 2016 - August 2016
Developed a framework for communication between Mathematica and hardware interfaces for robots to be used by other researchers, with a focus on extensibility and ease of integration.

Department of Mechanical Engineering, University of Michigan – Ann Arbor
Research Assistant September 2015 - April 2016
Researched the use of sound sensors to detect leakage in pipes. Utilized LabView to collect experimental data and analyzed the data using mathematical tools in MATLAB.

Professional Experience

EECS 445: Introduction to Machine Learning, University of Michigan – Ann Arbor
Instructional Aide January 2018 - April 2018
Taught fundamental concepts of machine learning.

Salesforce – San Francisco
Frontier Scale Software Engineering Intern May 2017 - August 2017
Worked with a team to pioneer the integration of a third-party software with Salesforce's Platform using Python and Javascript to satisfy customers' needs. Presented the product to C-level executives of a corporate client.

Extracurricular Activities

UM::Autonomy – University of Michigan
Artificial Intelligence Team Lead September 2015 - April 2018
Constructed a fully autonomous robot boat every year to compete at the annual RoboBoat competition. Head of the AI team, which is in charge of the software and algorithms used by the boat to complete various challenges autonomously. Supervised data collection, object detection, and control systems.

Other Projects and Skills

Facial Expression Classification using Autoencoder and Convolutional Neural Networks
Technologies: Python, Tensorflow, Machine Learning algorithms
Classified images of facial expressions into sentiments, using techniques such as k-means clustering, autoencoders, and convolutional neural networks.

ICLR 2018 Reproducibility Challenge, EECS 498: Reinforcement Learning
Technologies: Python, Tensorflow
Reproduced the results from the paper "Curiosity-driven Exploration by Bootstrapping Features", which was submitted to ICLR 2018. My teammate and I reimplemented the entire model in TensorFlow from scratch. Our report and code can be found on my Github.