JICHENG LI
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EDUCATION

University of Delaware, Newark, DE

Ph.D. Program, Computer and Information Science, May 2019 - Present

Michigan State University, East Lansing, MI

Master of Science, Computer Science, May 2019

Northeastern University, Boston, MA

Master of Science, Electrical and Computer Engineering, December 2016

Harbin Institute of Technology, Harbin, China

Bachelor of Engineering, Electrical Engineering, January 2015

PROFESSIONAL HONORS AND AWARDS

- **Michigan State University Graduate Office Fellowship**, Fall 2017
- **Meritorious Winner at Science and Technology Innovation Contest, Harbin Institute of Technology,** 2013 – 2014

PUBLICATION

Bi Xiaojun, Wang Jue, Li Bo and ***Li, Jicheng, Constrained Optimization based on ε Constrained Biogeography-Based Optimization with Dynamic Migration, Journal of Computer Research and Development, 2014, 51(3): 580-589.***

RESEARCH EXPERIENCE

Research Assistant

HCI Lab, University of Delaware, Newark, DE, June – August 2019

- Wrote a brief survey on the latest research trends in VR and AR based on publications on ETRA, IEEE VR, and ISMAR.

Machine Learning Engineer

GENISAMA LLC, Okemos, MI, January – August 2017

- Developed GPU kernels for Developmental Neural Network (DN), a hierarchical visual cortex model, using OpenCL. It obtained an average of 4 times speed up comparing with CPU runtime.
- Trained, tested, and debugged the DN program. Fixed bugs in synapse maintenance, etc.

Research Student

Worcester Institute of Technology, Worcester, MA, June – August 2016

- Preprocessed a real-world, large-scale raw dataset, which contains more than 100 million electricity consumption records.
- Tested optimization schema of the grid network using fine-tuned KNN method.

Research Student, Inventor

Harbin Institute of Technology, Spring 2013

- Developed an access control system based on Bluetooth module, motors and microprogrammed control unit (MCU), providing an innovative way to open physical locks by mobile phones.
- Patent publication number: CN103295303B.

SELECTED PROJECTS

Behavioral Cloning

University of Delaware, Fall 2019

- Trained a deep convolutional neural network to replicate the human steering behavior while driving, taking the steering info and images captured by cameras mounted in front of the car as input.
- The car can drive automatically and safely on both tracks in Udacity's Self-Driving Car Simulator.

Trigger Word Detection System
Michigan State University, Spring 2019

- Synthesized and processed audio recordings and encoded audio inputs with a 1-D convolutional layer.
- Trained a sequential model composed of stacked GRUs to learn temporal features of trigger words.
- Capable of detecting the trigger word 'activate' and marked fifty subsequent time frames as active.

Sentiment Analysis on Movie Reviews
Michigan State University, Spring 2019

- Trained a naïve Bayesian classifier on film review data using unigram as features to classify whether a comment is positive or negative.
- Obtained an average validation accuracy of 87%.

Jazz improvisation with LSTM
Michigan State University, Fall 2018

- Trained an LSTM to learn and generate musical values.
- Processed generated musical values into midi music to improvise jazz solo.

Autonomous Robot Navigation
Northeastern University, Fall 2015

- Programmed a mobile robot using Robotics Operating System (ROS) and MATLAB Robotic Systems Toolbox. The robot was capable of map generation, path planning in a (dynamic) world map, obstacle avoidance, and waypoint navigation.

TEACHING EXPERIENCE

Teaching Assistant
Computer and Information Sciences, University of Delaware, September 2019 – Present

- CISC 474 Advanced Web Technologies. Held TA session and in-class question answering.

Teaching Assistant
Computer Science and Engineering, Michigan State University, September 2017 – May 2018

- CSE 232 C++ Programming. Led lab sessions and office hour instructions.

TECHNICAL SKILLS

Programming: Python, C/C++, MATLAB.
Libraries/Tools: PyTorch, TensorFlow, Keras, scikit-learn, Pandas, NumPy, OpenCL, LATEX.