Xinhe Zhang

Software experience in the industry and academic research background in machine learning
Now seeking machine learning related engineering opportunities

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EDUCATION

Carnegie Mellon University — Pittsburgh, PA

Master of Science in Electrical and Computer Engineering; GPA: 4.0 / 4.0 — *Expected Dec 2020*
- Courses: Intro to Deep Learning, Advanced Deep Learning, Probabilistic Graphical Models, Information Theory
- Planned: Intermediate Statistics, Advanced Machine Learning, Computer Vision

Bachelor of Science in Electrical and Computer Engineering with University and College Honors; GPA: 3.68 / 4.0 — *May 2018*
- Courses: Deep Reinforcement Learning and Control, Intro to Machine Learning, Natural Language Processing, Fundamentals of Control

ACADEMIC AND RESEARCH PROJECTS

Safety Analysis of Transcranial Electrical Stimulation - Master's Research Project — *Sep 2019 - Present*
- Simulated human head models in COMSOL and assessed safety measurements for transcranial electric stimulation as part of a novel human brain stimulation project.

Second Language Acquisition Modeling with Deep Learning — *Sep 2019 - Dec 2019*
- Adapted and analyzed various deep learning models to predict errors second language learners are likely to make in the future and beat the given baseline 85.6%.

Diabetic Retinopathy Detection with Deep Learning - Bachelor's Research Project — *Sep 2017 - May 2018*
- Designed and developed a machine learning pipeline that first captured the underlying domain knowledge from retina fundus images and classified processed results with 86% accuracy.

WORK EXPERIENCE

Carnegie Mellon University — Pittsburgh, PA
Research Assistant at the Robotics Institute Navigation Laboratory — *Sep 2019 - Present*
- Created synthetic road scene images with Carla simulator and Autodesk Maya and trained neural networks to detect objects in real images for autonomous driving tasks with 100% accuracy for targets in interest.

Guangdong 999 Brain Hospital — Guangzhou, China
Assistant to the Dean — *Jun 2019 - Aug 2019*
- Processed thousands of patient data entries into a machine-readable format for research purposes.
- Evaluated million-dollar machine learning products by analyzing embedded technologies for the Vice President.

Duolingo, Inc — Pittsburgh, PA
Android Developer — *Nov 2018 - May 2019*
- Collaborated with the China team and communicated with vendors to establish Android push notification in China.
- Introduced UI/UX improvements to the purchasing screens on Duolingo Android and boosted membership sales.

Expii, Inc — Pittsburgh, PA
Engineer Intern — *Aug 2018 - Oct 2018*
- Implemented changes across the stack and collaborated with the content team to boost SEO results to Google Search's first-page ranking by editing embedded metadata as the sole engineer.

Facebook, Inc — Seattle, WA
Software Engineer Intern — *May 2018 - Aug 2018*
- Built a full-stack web app that queries from databases and collectively displays the results with user-specified parameters as part of the Facebook Analytics Automated Insights.

Google, Inc — Mountain View, CA; Boulder, CO
Software Engineer Intern — *May 2017 - Aug 2017*
- Created a web data visualization tool to compute logic relationships among datasets for 150 monthly professional users.
- Improved filtering methods and data animation by manipulating D3.js, solving the pain point for 100 daily professional users.

Engineering Practicum Intern — *May 2016 - Aug 2016*
- Deployed a C++ backend server that retrieves data from a large, spatially indexed table for visualizing geospatial data.
- Researched and crafted an interactive web display of 3d geospatial data with WebGL and Google Maps API.

LEADERSHIP

Teaching Assistant, *Carnegie Mellon University* — *May 2015 - May 2018; Aug 2019 - Present*
Co-Founder, *Talent Pool (Startup)* — *Oct 2017 - May 2019*
Corresponding Secretary and Elected Member, *IEEE-Eta Kappa Nu Honor Society Sigma Chapter* — *May 2017 - Aug 2018*
Co-President and Panel Director, *CMU Innovation and Entrepreneurship Association* — *Feb 2017 - Aug 2018*
College Reading and Learning Association Certified Level 2: Advanced Tutor, *Carnegie Mellon University* — *Feb 2015 - May 2018*

SKILLS

Languages: Python, Javascript, Kotlin, C/C++, SQL, LaTeX

Tools: PyTorch, TensorFlow, Keras, Detectron, React, Redux, Express, AWS, COMSOL, Microsoft Office