Zixian Ma

Stanford, CA | (650) 441-7472 | zixianma@stanford.edu | https://www.linkedin.com/in/zixian-ma/

EDUCATION

Stanford University

Computer Science; GPA: 3.98/4.0 *9/2018 – 6/2021*

Relevant Coursework: Reinforcement Learning, Machine Learning, Machine Learning with Graphs, Natural Language Understanding, Convolutional Neural Network for Visual Recognition, Programming Abstractions (C++), Design and Analysis of Algorithms, Representations and Algorithms for Computational Molecular Biology

RELEVANT EXPERIENCE

Facebook – *Software Engineering Intern* *6/2021 – 8/2021*

- Built and optimized **Multi-Task Multi-Label** models for Facebook stories ranking with **Multi-gate Mixture of Experts** module and auto gradient balancing techniques
- Launched the models to production and significantly reduced the company's multi-feed CPU usage by 0.06%

Stanford Vision and Learning Lab (@ Stanford AI Lab) – *Student Researcher* *4/2020 – 9/2021*

- Conducted an independent research project (supervised by Dr. Fei-fei Li and Dr. Ranjay Krishna) on intrinsic motivation for **multi-agent coordination** and submitted a paper to a top-tier conference

THUNLP lab (@ Tsinghua University) – *Research Intern* *1/2021 – 5/2021*

- Contributed to the OpenAttack project, an open-source toolkit for **textual adversarial attacks and defenses**, by writing and evaluating attacks and adding support for Chinese transformers
- Published OpenAttack in the ACL2021 Demo Track (https://aclanthology.org/2021.acl-demo.43.pdf)

IBM China Development Lab – *Algorithm Engineer Intern* *6/2019 – 8/2019*

- Evaluated different text classification models for Chinese **NLP**, and improved the confidence of the classification algorithm by 20~30% using **transfer learning**
- Contributed to the **CV** component of the BMW automobile parts counting project by optimizing the algorithm with **edge detection, data augmentation**, and improved prediction to be two times faster (within 1.0 second)

Stanford Future Data Systems (@ Info Lab) – *Independent Research Student* *1/2020 – 5/2020*

- Built infrastructure for reliable ML systems by evaluating verified models in the face of adversarial examples and data with distributional shift

Gevaert Lab (Biomedical Computation) – *Student Research Assistant* *11/2018 – 4/2019*

- Programmed in **R** to analyze a large dataset (188 samples and 40,000+ features) with Ewing Sarcoma patients' methylation data using **dimensionality reduction** algorithms PCA, t-SNE, umap and **clustering** algorithms

LEADERSHIP

Student Leader @ Stanford Existential Risks Initiative (SERI) *3/2020 – 1/2021*

- Planned, launched and organized the first SERI summer research program (250+ applicants, and 19 accepted fellows)

Academic Lead & Head AL @ TechX Academy 2019 & 2020 *7/2019 - 8/2020*

- Tutored 30+ high school students in the Bioinformatics class for R and Python programming and data analysis (2019)
- Led a team of 3 professors and 4 college students to design and teach the Intro to Bioinfo & CompBio class (2020)

EXTRACURRICULAR ACTIVITIES

Scholarship Recipient @ Grace Hopper Conference 2020 7/2020

Sponsor Prize Winner @ TreeHacks *2/2019*

- Built a web application Runway to connect students for safe ridesharing and won the "Best Use of Wix Code" prize out of 181 projects and 1,254 registered hackers

Best Overall Prize @ Hackoverflow *4/2019*

- Built a chatbot Taylor to help sexual assault victims by centralizing resources and providing clear guidance

SKILLS

- Technical: Python, C++, C, R, Java, Pytorch, TensorFlow, HTML&CSS, Bootstrap, JavaScript, React, SQL
- Languages: proficient in Mandarin and English, spoken Cantonese