

Zilin Wang

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EDUCATION

UNIVERSITY OF MICHIGAN | GPA: --/4.00

M.S. Computer Science & Engineering

August 2021 - Present

Ann Arbor, MI

THE OHIO STATE UNIVERSITY | GPA: 3.947/4.00

B.S. Computer Science & Engineering (AI track)

August 2017 - May 2021

Columbus, OH

- Honors and Distinctions: Summa Cum Laude; Dean's List seven semesters consecutively

TECHNICAL & SOFT SKILLS

- **Math & Statistics:** Linear Algebra; Probability and Random Process; Ordinary and Partial Differential Equations; Higher Mathematics Multivariate Calculus
- Python(fluent), Java(fluent), C/C++(fluent), JavaScript, Scheme, SQL, HTML/CSS, Ruby, MATLAB
- PyTorch(preferred), Tensorflow, Seaborn, Ruby on Rails, Wireshark, Mathematica, Solidwork

PROJECT EXPERIENCE

Inspecting Ultrasound Image of Unborn Fetus by Deep Learning Integrated System

May 2021 – July 2021

Supervisor: Prof. Ningbo Zhu

- A general classifier(yolov5) was trained on raw images gathered from hospitals in Shenzhen to recognize which organ they represent.
- A more sophisticated model with visual reasoning components(module network) were trained to assess the quality of raw images.

Adaptive Optics-Scanning Laser Ophthalmoscopy Image Analysis Using Deep Learning

January 2021 – April 2021

Report: "AO-SLO Image Analysis – Cone/Rod Recognition", Faculty Leader: Prof. Rajiv Ramnath

- Utilized deep learning models, specifically Unet/Unet++ and ordinary CNN, to present AI based solutions for identifying retinal diseases.
- Upon finishing, doctors can diagnose diseases more easily and accurately.

Verifying the Learnability of Bounded-Convex-Lipschitz Problem

November 2020 – December 2020

Report: "Project: Stochastic Gradient Decent", Advisor: Prof. Raef Bassily

- Given two scenarios of different domain and feature space, implemented stochastic gradient descent algorithm for logistic regression.
- Analyzed the M-bound and ρ -Lipschitz of each scenarios, and proved the estimate of expected excess risk is up bounded.

Sarcasm Detection on News Headlines

October 2020 – December 2020

Report: "Exploring Sarcasm Detection on News Headlines", Advisor: Prof. Huan Sun

- Designed an n-gram model with sentiment features, and an RNN fed with pre-trained and self-trained word embeddings
- Proposed to regard sarcasm detection as a question-answering problem rather than a classification problem.

ACADEMIC EXPERIENCE

University of Michigan

September 2021

Instructional Aide, Applied Machine Learning, School of Information, Supervisor: Prof. Kevyn Collins-Thompson

Ann Arbor, MI

Hunan University

May 2020 – August 2020

Project Member, College of Computer Science and Electric Engineering, Supervisor: Prof. Ningbo Zhu

Changsha, China

- Helped improve the attendance management system by integrating face detection model.
- Implemented real-time overlays, a React frontend, and a Flask backend.

THE OHIO STATE UNIVERSITY

January 2020 - May 2020

Grader, Intro to AI, Department of Computer Science and Engineering, Supervisor: Prashant Serai, Joseph Barker

Columbus, OH

- Graded students' projects and homework assignments, held weekly office hours for students who needed help.

Hunan University

May 2017 - Aug 2017, Dec 2017 - Jan 2018

Part-time Research Assistant, School of Physics and Electronics, Supervisor: Dr. Zilong Zhang.

Changsha, China

- Set up formulas on MATLAB and Mathematica, to assist the team with validating proposed hypothesis by processing experiment data.
- Published one research paper as second writer, one as third writer, and one as fifth writer.

PROFESSIONAL EXPERIENCE

Hunan Infopass Information Technology Co. Ltd.

June 2018 - August 2018

Intern, Technology Department, Intelligent Transportation Systems for Changsha and Wuhan

Changsha, China

- Trained a MCNN model for estimating crowding levels in subway trains in two of China's provincial capitals.
- Tested suitability of images from the train's surveillance cameras for the training dataset by writing test-runs in Python, and drafted guidelines for training dataset selection.

ACITVITIES & INTEREST

- CITI program certification: Responsible Conduct of Research (biomedical), Human Subjects Protection (biomedical)
- 2018 OSU Hackthon (Team Leader)
- Organized basketball games at least once per week at RPAC, The Ohio State University.
- Interest: Basketball, Badminton, Pool, Ping-Pong, Fishing, Cooking, Skateboarding
- Language: Mandarin (native), English (TOEFL MyBest scores 109)