

Zeyu Wang

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EDUCATION

University of Illinois Urbana-Champaign

Master of Engineering in Electrical and Computer Engineering - GPA: 4.0/4.0

Imperial College London

Machine Learning and Applied Statistics Summer School - GPA: 4.0/4.0

University of Nottingham

Bachelor of Computer Science with Artificial Intelligence - GPA: 3.94/4.0 (Top 1%)

Aug. 2022 – May 2024

Illinois, US

Jul. 2019 – Aug. 2019

London, UK

Sept. 2018 – Jul. 2022

Nottingham, UK

WORK EXPERIENCE

Zoox (Amazon)

May 2023 – Dec. 2023

Machine Learning Engineer - Intern

Foster City, CA

- Researched and extended the latest **Generative AI Models** to push the boundaries for autonomous driving
- Collaborated with over **10** engineers to benchmark and integrate models, empowering **2** crucial cross-team systems
- Combined **C++** and **Python** to balance performance and complexity and utilized **Bazel** for project organization
- Introduced **30%** new data fields through mining, processing, and retrieving in the data pipeline for model training
- Simplified **Protobuf** API and introduced robust code for model inference, which facilitates cross-team integration
- Distributed dataset generation and model training in clusters and visualized the key data insights with **Plotly**
- Presented the results to the wider AI-driving teams at Zoox and targeted external conference **publications**

ALL Link (Start-up)

Sept. 2020 – May 2022

Machine Learning Engineer - Intern

Remote

- Established a discussion and trading platform, attracting over **4000** active users in **10** universities around the world
- Proposed an ID card recognition solution using **OpenCV**, which is more robust than most open-source methods

RESEARCH

Human Activity Recognition Using Deep Learning on Radar Signatures

Jul. 2021 – Jul. 2022

Software & Research Engineer – First Author Paper Published

- Proposed **3D Projected EfficientNet** to interpret radar signals, which outperforms the SOTA method by **5.7%**
- Designed distributed processing pipelines and training frameworks using **PyTorch**, increasing speed by **50%**
- Implemented and evaluated models including 3D ResNeXt/EfficientNet, 3D Non-local Block, CNN-LSTM and ViT
- Automated experiments with **Python** and **Bash** while introducing **Docker** to manage different GPU clusters

Detection of COVID-19 Through Thermal Sensing Using Smartphone

Oct. 2020 – Aug. 2021

Software & Research Engineer – First Author Paper Published

- Integrated and optimized **C/C++** modules, which achieve 60 fps for face key point tracking and data collection.
- Deployed trained **GRU** network with **TensorFlow Lite** and connected with **Android** interface based on **MVVM**
- Conducted auto-testing using **GitLab CI/CD** in **Docker** and introduced mock tests with **JUnit** and **Mockito**

PROJECTS

Deep Java Library (Amazon)

Dec. 2022 – Present

Open Source - Contributor

- Discovered and fixed **Deep Learning** frameworks integration failures in the developers' **Docker** environment

Autonomous Vehicle Group Project

Jul. 2021 – Jul. 2022

Software Engineer

- Implemented and accelerated a RGB-D road segmentation method by 50% using **PyTorch** with **TensorRT**
- Paralleled and accelerated the modules by 20% using **fork & thread** and connected boards through **C Socket**

M5 Forecasting – Accuracy, Kaggle Data Science Competition

May 2020 – Jul. 2020

Algorithm Engineer – Silver Medal (Top 5%, ranked 271/5544)

- Analysed Walmart retail data with over 2000 features using **Pandas**, accelerating by 20% with **multi-processing**
- Improved prediction accuracy by 20% using **LightGBM** and optimized the code for GPU, accelerating by 15%

TECHNICAL SKILLS

Languages: Python, C/C++, Java, Haskell, Matlab, R, \LaTeX , Shell, SQL, JavaScript, HTML/CSS, PHP, Assembly

Libraries: PyTorch, TensorFlow, LightGBM, OpenCV, NumPy, Pandas, ECharts, Plotly, PyTest, Protobuf, Mediapipe

Developer Tools: Ubuntu, Docker, Kubernetes, GitLab CI/CD, Maven, Gradle, Bazel, Git

Frameworks: React, Spring Boot, MySQL, MongoDB, Spark **Platform:** GCP, GPU Clusters, Android, Jetson Board