Chengshuo (Danny) Jiang

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EDUCATION

University of Michigan–Ann Arbor, Ann Arbor, MI — Sept 2022 – May 2025

- **Computer Science** (BSE) | GPA: **3.93**/4.00
- Course Highlights: Information & Data Structures (C++), Computer Organization, Computer Algorithms, Computer Security, Machine Learning, Database Management Systems, Web Systems, Software Engineering, Computer Vision (in progress), Machine Learning Research Experience (in progress)

University of Wisconsin–Madison, Madison, WI — Sept 2021– May 2022

- Major in Computer Science | GPA: **4.00**/4.00

SKILLS

- Programming Languages: Java, C++, Python, JavaScript, HTML, Bash, SQL
- Software Skills & Frameworks: React, Flask, REST API, Linux, Docker, PyTorch, TensorFlow, Git, CI/CD
- GitHub Profile/Project Portfolio: https://github.com/DannyJiang1

PROFESSIONAL EXPERIENCE

PowerInfer Adversarial Attack Research, Ann Arbor, MI — May 2024 – Present

Mentored by PhD Student Haizhong Zheng, Advised by Dr. Atul Prakash, Professor of EECS at UMich

- Conducted an in-depth analysis of the PowerInfer codebase to understand the mechanisms behind GPU/CPU splits and their impact on neural network performance and efficiency
- Benchmarked PowerInfer's performance on llama 7B and llama 13B models using various hyperparameters, analyzing how different CPU/GPU split configurations affect model speed and accuracy compared to standard llama.cpp implementations
- Investigated potential adversarial attacks that exploit the GPU/CPU split determinations, developing strategies to identify and mitigate these vulnerabilities, thereby enhancing the security and robustness of large language models

SUSE Linux s.r.o, Prague, CZ — Jun 2023 – Aug 2023

Software Engineer Intern

- Worked with the Factory Team, developing Project Iguana, an initial ramdisk designed to prepare environments through the orchestration of containers
- Implemented various containerized scripts to partition block devices according to user-defined sizes and partition types, and to mount filesystems at specified points
- Acquired extensive knowledge and industrial insights on Docker, Python, Linux, and Bash scripting

PROJECT EXPERIENCE

Stock Price Predictor LSTM Model — Jun 2024 – Present

Independent Project

- Developed a robust LSTM-based machine learning model for predicting stock closing prices, incorporating advanced technical indicators and macroeconomic factors
- Implemented comprehensive data preprocessing pipeline utilizing the Yahoo Finance API for historical stock data, along with FRED API for macroeconomic indicators such as interest rates, unemployment rate, and consumer sentiment
- Integrated a fully functional feature scaling and transformation process ensuring consistent data handling for both training and prediction phases, with automated model training, saving, and loading capabilities

Mindfulness Tree App — Nov 2022 – May 2023

Alternate Reality Initiative Project

- Developed an augmented reality (AR) mobile application that enables users to set daily tasks and reminders, with a rewarding mechanism of virtual watering cans upon completing each task
- Projected Blendr tree models onto the user's actual hand, allowing them to water the tree using AR technology, implemented through Unity and Niantic Lightship
- Implemented scripts for hand tracking and displaying tree models, as well as scripts to store persistent user data, ensuring data retention even after the application is closed