Alysa Zhao

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Education

Texas A&M University College Station, TX
B.S. Computer Science *May 2028*
President's Endowed Scholar, National Merit Scholar

Relevant Coursework: Data Structures & Algorithms, Program Design & Concepts (C++), Multivariable Calculus, Differential Equations, Discrete Math, Linear Algebra, Introduction to Programming (Python)

Technical Skills

Languages: C++, Python, Java, JavaScript, Typescript, HTML/CSS, SQL
Technologies: Git, Github, Docker, Node.js, JupyterLab, Tensorflow, Keras, Scikit-learn, Pandas, Excel, VS Code

Experience

ENGR-102 PT Aug 2025 – Present
Texas A&M University *Plano, TX*
- Choreographed and taught hip-hop, jazz, and contemporary dance routines to young students for 50 hrs/week
- Worked with a clothing manufacturer to design award-winning costumes for national dance competitions

AI Research Intern June 2025 – Present
University of Texas at Dallas *Dallas, TX*
- Researched Low-Rank Adaptation (LoRA) to improve fine-tuning efficiency of large-scale transformer models.
- Analyzed trade-offs between rank adaptation, memory efficiency, and task performance to inform design choices.
- Rapidly self-learned advanced model optimization techniques, like LoRA for fine-tuning, PPO & GRPO for reinforcement learning, and attention mechanisms

Projects

Miso Hungry | *Python, Scikit-learn, HTML, Javascript* 2025
- Developed an ML-powered web app to recommend Asian cuisines based on ingredients in users' pantries
- Trained various models, achieving a 86% cuisine accuracy w/ RFST and 84% w/ SVC from 380 ingredients
- Visualized model architectures and performance metrics using Netron and Matplotlib to guide improvements

Electricity Demand Forecaster | *Python, Scikit-learn* 2024
- Predicted future hourly electricity demand with machine learning and regression modeling, using historical energy demand, average precipitation, and time-based features
- Performed data preprocessing, EDA, and feature engineering on a dataset of 14000+ rows
- Implemented and optimized LSTM models, and visualized patterns with seaborn graphs

Dungeon Crawler | *C++* 2024
- Game-ified file I/O with user-input for players to combat monsters and solve puzzles.
- Constructed player interaction systems which changed map features in real time
- Added difficulty adjustment mechanisms using player performance data to dynamically scale game challenges.

Two Player Arcade | *Java* 2024
- Coded an interactive web applet with snake and brick breaker levels, for two players to play simultaneously.
- Developed back-end technology and front-end user-movement based animation using Java AWT and Swing, and event listener GUI

Awards & Certifications

- National Merit Scholarship (Top 0.02 % of Graduating Class)
- DeepLearning.AI – Advanced Learning Algorithms
- DeepLearning.AI – Supervised Machine Learning: Regression & Classification