

# Kyler Cao

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## EDUCATION

### Texas A&M University

College Station, TX

*Bachelor of Science in Computer Science, Minor in Business*

*Aug. 2023 – May 2027*

- **Relevant Coursework:** Computer Systems, Computer Organization, Programming Languages, Discrete Structures, Design and Analysis of Algorithms, Program Design and Concepts, Machine Learning

## TECHNICAL SKILLS

**Languages:** Java, Python, C++, SQL (PostgreSQL), JavaScript/TypeScript, HTML/CSS, C#

**Frameworks:** React, Next.js, Flask, FastAPI, Node.js, Unity, FastAPI, Tailwind CSS, Django

**Developer Tools:** Git, Docker, Jupyter, VS Code, IntelliJ, Postman, PostgreSQL, MySQL

**Libraries:** pandas, NumPy, SciPy, Matplotlib, Seaborn, scikit-learn, statsmodels, XGBoost, Recharts

## EXPERIENCE

### Student Technician

October 2025 – Present

*Texas A&M TechHub*

*College Station, TX*

- Assisted **200+** faculty/staff with device setup, troubleshooting, and procurement through TechHub program
- Configured/deployed **1000+** university laptops, desktops, and tablets, improving imaging efficiency by **15%**
- Developed and maintained a **full-stack delivery management system** using **Flask, React, & MySQL**, processing **150+** monthly orders with **99.8%** uptime and automated order history audit tracking
- Collaborated with IT staff to maintain asset records for **1000+** devices and improve TechHub documentation by assisting with **8+** internal tool development and deployment.

### Teacher Assistant

Aug 2024 – May 2025

*Texas A&M University*

*College Station, TX*

- Assisted teaching foundational **Python** course to **120+** students, improving average class performance by **15%** through targeted programming instruction
- Led and instructed weekly laboratory sessions for **PHYS 216 (Mechanics)**, guiding students through experimental setup, data analysis, and lab reports
- Graded **400+** assignments, lab reports, and exams with average **24-hour** turnaround time, providing detailed feedback and support to students

## PROJECTS

### Project SHADE | *Python, SEIR modeling, NumPy, Matplotlib* | LSTM Subteam September – December 2025

- Contributed to an **ensemble heat-wave prediction system** by developing the **LSTM component**, integrating **SEIR-based epidemiological modeling** with machine learning using **10+** years of historical Austin temperature data, achieving **87%** validation accuracy
- Implemented a **scalable data pipeline** processing **500K+** data points, including ingestion, cleaning, **feature engineering** (temporal lags, rolling statistics), and automated train/validation splits for ensemble inputs
- Designed and tuned the **LSTM neural network** as part of the ensemble (**hyperparameter optimization**, sequence length tuning), improving model-level accuracy by **23%** and visualized performance with **Matplotlib**

### FlightPath | *Flask, REST API, SQL, pandas* | TAMUHack 2025

January 2025

- Designed/developed **AI-powered flight search engine** processing searches with personalized recommendations based on user preferences and historical flight data
- Built **responsive web interface** with **Flask** achieving less than **2s** average response time for real-time flight preference input, dynamic filtering, and tailored results display
- Integrated **REST APIs** handling **50K+** flight data requests for American Airlines mock data including prices, schedules, and **100+** route details