Brandon Yuan

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EDUCATION

Texas A&M University

College Station, TX

May 2026 Cumulative GPA: 4.00/4.00

Bachelor of Science in Computer Science Honors Student @ College of Engineering

WORK EXPERIENCE

Research Assistant

College Station, TX

August 2024 – Present

Texas A&M Department of Construction

- Trained, tested, and tuned different machine learning models (decision tree, random forest, regression) w/ Sci-kit Learn to accurately predict employee absenteeism within construction sites, utilizing datasets from 3+ construction companies
- Led feature engineering for commute time & weather with APIs, refactored databases from **2 companies** (using Pandas & SQL), and conducted hyperparameter tuning to improve model accuracy
- Collaborated with Professor Aryal to report insights via the Aggie Research Program, and reported findings to companies

Project Manager

College Station, TX

Notes with Canvas | React.js, Axios, JavaScript, Python, Flask, Canvas API, Firebase

September 2023 - May 2024

- Won "Best Learning-Focused Project" from among 36 other projects in the Aggie Coding Club
- Developed a task-management web app, featuring integration with Canvas to dynamically populate calendar & task board interfaces, with the support of a Firebase-hosted Flask server that returned JSON data from users' Canvas courses
- Coordinated a 15-member team through 9 Agile sprints, designed & divided tasks between frontend/backend teams

Project Manager

College Station, TX

VibeMap for Spotify | React.js, React-force-graph, TypeScript, Python, SciPy, Flask, Spotify API

September 2024 - Presents

- Conducted in-depth data analysis using SciPy by using Spotify's song data as well as extracting unique features (e.g. spectral contrast) from frequency data, to generate detailed classifications of different tracks
- Visualized data through a web (using D3.js & react-force-graph), enabling users to explore connections between songs

Research Collaborator

College Station, TX

Texas A&M Department of Computer Science

September 2023

- Participated in a research study which examined group collaboration between students solving LeetCode problems
- Focused on algorithm design, debugging, and optimizing runtime and space complexities of solutions

PROJECTS

Red Dead Convolution | *PyTorch, TensorFlow, OpenCV, NumPy*

September 2023 - December 2023

- Designed and trained an image classification model on 500+ in-game screenshots from the video game Red Dead Redemption II, achieving 87% detection accuracy through model finetuning
- Collaborated with a **team of 30+** to augment datasets (using OpenCV), then developed a convolutional neural network to classify different objects (e.g. horses & cowboys) by extracting shapes, pooling layers, and then connecting them

Chess Mobile App | C#, .NET, SQLite, Xamarin.Forms

January 2023 – May 2023

- Developed a fully functional chess application using Xamarin.Forms and .NET, incorporating an SQLite engine for settings management and game data storage
- Collaborated with **2 other students** to complete the project under a **3-month timeline** via **6 Scrum sprints**, handling key features like multiplayer mode and AI opponent

SKILLS, ACTIVITIES & INTERESTS

Technical Skills: Java, Python, C#, C++, JavaScript/TypeScript, HTML & CSS, React.js, Flask, PyTorch

Areas of Focus: Web Development, Convolutional Neural Networks, Data Analysis, Deep Learning

Relevant Courses: Data Structures & Algorithms, Discrete Mathematics, Calculus III, Stanford Machine Learning (CS 229)

Interests: Cooking, Basketball, Classical Piano & Trumpet