

Brandon Yuan

brandonyuan05@gmail.com • (512) 413-6692 • brandonyuanCS.github.io

EDUCATION

Texas A&M University
Bachelor of Science in Computer Science
Honors Student @ College of Engineering

College Station, TX
May 2027
Cumulative GPA: 3.71/4.00

EXPERIENCE

Product Innovation Intern
DigiCert

Austin, TX
May 2025 – August 2025

- Developed a WordPress extension allowing e-commerce sites to streamline the signing & embedding of **C2PA credentials** into product images, ensuring authenticity by fully displaying image provenance
- Engineered lightweight image signing service using CSC-based API with **sub-500ms latency** to seamlessly intercept image uploads
- Extended functionality by creating a web extension to replicate image credential verification, broadening scope of product

Research Assistant
TAMU Department of Construction

College Station, TX
August 2024 – Present

- Trained & tested different machine learning models (random forest, regression, kNN) to predict employee absenteeism within construction workforces & identify unique insights with exploratory data analysis
- Analyzed **4.9 million hours** of workforce data spanning **500+ employees** across **8 construction companies** over **5 years**
- Refactored databases from **3 companies** & **led feature engineering** for commute time & weather with historical API data
- Reported insights to **Aggie Research Program** and eventually the **CI & CRC Joint Conference 2026**

Projects Officer & Manager
Aggie Coding Club

College Station, TX
September 2023 - Present

- Directed the ideation & development of **Notes with Canvas** and **Spotify VibeMap**, two separate year-long software projects
- Organized teams of 10-20 students by implementing structured collaboration workflows & holding regular meetings
- Held regular meetings/workshops to check in with other project managers, providing resources & advice to help them succeed

PROJECTS

Spotify VibeMap | *React, react-force-graph, node2vec, NetworkX, scikit-learn, Flask, Spotify API*

September 2024 – April 2025

- Created an app that connects to users' Spotify accounts to vectorize their music taste & generate recommendations
- Visualized data through a **3D undirected graph**, enabling users to explore connections between songs, artists, & genres
- Built a graph traversal pipeline to generate music similarity embeddings, capable of simulating **10 random walks** per node across **~200 song nodes** within **3 minutes**, uncovering indirect song relationships & unique insights

Notes with Canvas | *React, Flask, Canvas API, PostgreSQL, Firebase*

September 2023 – April 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

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

September 2023 – December 2023

- Designed and trained an image classification model on **100+ in-game screenshots** from the video game *Red Dead Redemption II*, achieving **80% 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

SKILLS & INTERESTS

Technical Skills: Python, C++, Java, TypeScript, React, Flask, PyTorch, PostgreSQL

Developer Tools: Git, Linux, Docker, Postman

Areas of Focus: Full-stack Development, Machine Learning, Data Analysis & Visualization

Relevant Coursework: Data Structures & Algorithms, Design & Analysis of Algorithms, Linear Algebra, Computer Organization