Brandon Yuan

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EDUCATION

Texas A&M University — **College Station, TX**
Bachelor of Science in Computer Science — *May 2027*
Honors Student @ College of Engineering — *Cumulative GPA: 3.71/4.00*

EXPERIENCE

Product Innovation Intern — **Austin, TX**
DigiCert — *May 2025 – August 2025*

- Prototyped a web extension to classify images using **C2PA credentials** & an **AI-image detection model** to flag images as real/fake based on verified metadata or high likelihood scores from model inference
- Developed the backend of a WordPress extension, allowing image authentication by using a CSC-based API to sign & embed C2PA credentials that users upload to their sites

Research Assistant — **College Station, TX**
TAMU Department of Construction — *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 — **College Station, TX**
Aggie Coding Club — *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