

Brandon Yuan

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EDUCATION

Texas A&M University

Bachelor of Science in Computer Science

Honors Student @ College of Engineering

College Station, TX

Aug. 2023 – May 2027

GPA: 3.71/4.00

EXPERIENCE

Product Development Intern

May 2025 – Aug. 2025

DigiCert

Austin, TX

- Developed WordPress plugin for **100+ WooCommerce merchants** to automate the embedding of signed C2PA credentials into product images, shortening manual workflows by **75%** and increasing customer purchase confidence
- Engineered high-performance microservice to sign image metadata, integrating CSC-based APIs to maintain **sub-500ms** response times for image uploads under peak traffic
- Created browser extension to verify C2PA credentials, expanding authentication ecosystem beyond WordPress

ML Research Assistant

Aug. 2024 – Present

TAMU Dept. of Construction Science

College Station, TX

- Trained machine learning models (Random Forest & kNN) to predict employee absenteeism in construction workforces, achieving **R^2 of 0.82** and identifying key drivers like temporal and seasonal trends
- Analyzed **4.9 million hours** of workforce data spanning **500+ employees** across **8 companies** over **5 years**
- Refactored fragmented databases from **3 companies** into unified schema, reducing preprocessing time by **50%**
- Led feature engineering for commute time & weather with historical data, boosting model performance by **4%**

Projects Officer & Manager

Sep. 2023 – Present

Aggie Coding Club

College Station, TX

- Directed projects program consisting of **20+** active software projects with **200+** student developers, automating project assignment and Discord-based communication workflows
- Established PM training program supporting **30+ project managers** and maintaining a project completion rate of **95%** through structured mentorship
- Personally led **2 separate year-long** software projects (Canvas2calendar, Spotify VibeMap), coordinating **15+ developers** across frontend, backend, and data teams in complete development cycles

PROJECTS

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

- Created a website to analyze users' Spotify listening habits and generate recommendations with vector embeddings
- Visualized data through a **3D undirected graph**, enabling users to explore connections between songs & genres
- Implemented graph traversal pipeline to create music similarity embeddings, processing **200+** song networks with **10 random walks** in under **3 minutes**, generating **4-5** non-obvious song connections per query

Canvas2calendar | React, Express, PostgreSQL, Google Cloud API

- Won **“Best Learning-Focused Project”** among **36 other projects** in Aggie Coding Club
- Developed a full-stack web extension enabling students to customize Canvas calendar imports with custom filtering (between assignments, classes, quizzes) and integration with Google Tasks
- Built efficient API supported by client-side, hash-based detection to reduce API calls by **90%** through differential sync, maintaining **<2 second** refresh times

TECHNICAL SKILLS

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