

# 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 Innovation Intern

*DigiCert*

May 2025 – Aug. 2025

*Austin, TX*

- Built WordPress plugin enabling **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 image signing microservice, integrating CSC-based APIs to maintain **sub-500ms** response times for image uploads through peak traffic
- Created browser extension to verify C2PA credentials, expanding authentication ecosystem beyond WordPress

### Research Assistant

*TAMU Department of Construction*

Aug. 2024 – Present

*College Station, TX*

- Trained machine learning models (random forest, regression, 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

*Aggie Coding Club*

Sep. 2023 – Present

*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 assignment & class filtering, color-coding, and integration with Google Tasks
- Built secure API to process Canvas ICS feeds with **<2 second** import times, integrating Google Cloud APIs and storing encrypted user preferences & credentials

## 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