Brandon Yuan

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Education

Texas A&M University   Expected May 2027
Bachelor of Science, Computer Science (Honors)   *GPA: 3.77/4.00*
- **Relevant Courses**: Data Structures & Algorithms, Machine Learning, Cloud Computing, Computer Systems

Experience

Product Development Intern   May 2025 – Aug. 2025
DigiCert
- Built Flask microservice automating image verification & signing with C2PA, maintaining <500ms responses
- Designed manifest signing pipeline with validation, hashing, PS256 timestamps, COSE signature embedding
- Deployed WordPress plugin authorizing 100+ WooCommerce vendors to signing services via REST APIs
- Parsed manifest chains to display EXIF metadata, device identifiers, and image provenance to customers
- Created browser extension to verify C2PA credentials, expanding authentication ecosystem beyond WordPress

ML Research Assistant   Aug. 2024 – May 2025
TAMU Dept. of Construction Science
- Trained multiple models to predict employee absenteeism in construction workforces, achieving R^2 of 0.82
- Analyzed 4.9 million hours of workforce data spanning 500+ employees across 8 companies over 5 years
- Engineered unified time-series schema across 3 disparate databases, reducing ETL pipeline runtime 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
- Mentored PMs from 20+ active projects via workshops & check-ins, achieving 85% project completion rate
- Automated workflows with Python scripts, assigning 200+ students to projects & creating Discord channels
- Led two software projects (Class2calendar, Spotify VibeMap), coordinating 15+ developers across teams

Projects

Periph4all | *Next.js, FastAPI, Groq, SentenceTransformers, scikit-learn*
- Built an AI chatbot to recommend gaming mice via semantic embeddings, placing 7th at TIDALHack 2025
- Implemented 384-dim embedding search with UMAP visualizations, processing 175+ products in <2 seconds

Class2calendar | *React.js, Supabase, Prisma, Stripe, Google Cloud APIs*
- Won "Best Learning-Focused Project" among 36 other projects in Aggie Coding Club
- Engineered local-first web extension to parse, filter, & aggregate calendar feeds to Google Calendar & Tasks
- Synced events efficiently via hashing, reducing Google API calls by 90% and maintaining <5s refresh times

Spotify VibeMap | *React.js, Flask, node2vec, NetworkX, scikit-learn, Spotify API*
- Clustered songs & genres using graph-based vector embeddings, visualized in a 3D interactive graph
- Implemented graph traversal pipeline to process 200+ song networks with 10 random walks in <3 minutes

Technical Skills

Programming Languages: Python, Java, C++, C#, TypeScript, JavaScript, Bash
Frameworks & Libraries: React.js, Next.js, Node.js, Express, FastAPI, PyTorch, OpenCV
Tools: Git, Linux, Docker, PostgreSQL, MongoDB, Supabase, AWS (EC2 & Lambda)
Concepts: Full-stack, Frontend, Backend, DevOps, CI/CD, Machine Learning, Cybersecurity, Cloud Computing