Brandon Yuan

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EDUCATION

Texas A&M University   Expected May 2027
Bachelor of Science, Computer Science   *GPA: 3.77/4.00*
- **Honors**: Craig and Galen Brown Engineering Honors, Dean's Honor Roll
- **Relevant Coursework**: Data Structures & Algorithms, Machine Learning, Cloud Computing, Computer Systems, Computer Organization, Software Engineering, Data Analytics & Cybersecurity, Competitive Programming

EXPERIENCE

Product Development Intern   May 2025 – Aug. 2025
DigiCert
- Built Flask microservices automating image verification & signing with C2PA, maintaining <500ms response times
- Designed manifest signing pipeline with validation, hashing, PS256 timestamps, and COSE signature embedding
- Deployed WordPress plugin authorizing 100+ WooCommerce vendors to image 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

Rerouted | *Next.js, React Native, FastAPI, Ray, Pydantic, AWS Lambda, Socket.io*
- Engineered a crew assignment engine for flight disruptions, maximizing coverage while validating FAA regulations
- Built optimization pipeline to evaluate 80,000+ scenarios for 600+ flights, parallelized across 8 AWS workers
- Developed WebSocket infrastructure, supporting a real-time flight map & mobile app notifications for airline staff

Class2calendar | *React.js, Supabase, Prisma, Stripe, Google APIs, Turborepo*
- Built a web extension to sync ICS feeds to Google Calendar & Tasks, won "Best Learning-Focused Project" at ACC
- Optimized Google API calls via local file processing, event hashing, & user storage, cutting sync overhead by 90%
- Integrated Google OAuth 2.0 with silent session persistence & edge-based logic, supporting multiple accounts

Periph4all | *Next.js, FastAPI, Docker, Groq, Sentence-Transformers, scikit-learn, Beautiful Soup*
- Built an AI chatbot to recommend gaming mice via semantic embeddings, placing 7th at TIDALHack2025
- Scraped & normalized pricing across retailers, filtering 1000+ mice to 175 products based on data availability
- Implemented 384-dimensional semantic search with UMAP visualizations, processing queries in <2 seconds

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, S3, Lambda, Lightsail)
Concepts: Full-stack, Frontend, Backend, DevOps, CI/CD, Machine Learning, Cybersecurity, Cloud Computing