Allen Sun

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EDUCATION

Texas A&M University, College Station, Texas — August 2022 - May 2026
Bachelor of Science in Computer Science, Minor in Business and Mathematics
GPA: 4.0; Engineering Honors Program
President's Endowed Scholar, National Merit Recognition Award

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Apple — May 2024 - August 2024
- Designed and prototyped a **Python**-based microservice that guardrails AI and ML fraud screening decisions from unintended side effects, migrated from an existing embedded solution to promote portability and scalability.
- Deployed service to an internal cloud platform, integrating into **Clojure** workflow and supporting 300 transactions per minute with processing volume of 5000 events per day.
- Utilized object-oriented design to create a flexible architecture allowing microservice adoption by teams with domain-specific use case requirements, implementing feedback from other software engineers in code review while balancing ML engineering requests.
- Designed unit and integration tests to ensure quality code in internal **GitHub** repositories, used **CI** tools to automate testing during software builds and minimize error-prone processes, and wrote development-to-production **CI/CD** pipelines that deploy service.
- Delivered technical and business presentations to software and machine learning engineers, program managers, and business leaders.

Peer Teacher, Texas A&M College of Engineering — August 2023 - Present
- Assist 60+ students for a **Python** class both in-class and through regular office hours, fostering a supportive learning environment.
- Grade assignments while maintaining consistency and providing detailed feedback in a timely manner.

Game Application Development Intern, Berkeley Pharma Tech (Remote) — May 2023 - August 2023
- Implemented features and improved iOS Deep Sea shooter game using **Unity, C#,** and Apple Developer Program.
- Overhauled and debugged **Git** repository and version control system by configuring Large File Storage.

ACTIVITIES

Aggie Data Science Club
Projects Officer — April 2023 - Present
- Organized 14 semester-long data science projects with 390+ total sign-ups since Fall 2023, increasing participation by 90%.
- Hold bi-weekly support syncs with 16+ project managers, emphasizing version control practices and Agile-based development.

Project Manager, Kaggle Walkthrough — September 2023 - December 2023
- Co-led Kaggle capstone competition project to over 40 participants through weekly meetings, mentoring and evaluating teams.
- Co-led 5 **Python** workshops covering data preprocessing, visualizations, machine learning algorithms, and model optimization and evaluation using **Numpy**, **Pandas**, **Matplotlib**, **Seaborn**, **Scikit-learn**, and **TensorFlow.**

Aggie Coding Club
Project Manager, AggieFunds — September 2023 - November 2023
- Led team of 6 in developing a crowdfunding website oriented toward Texas A&M students, organizations, and alumni.
- Developed full-stack website utilizing React and **Next.js**, with **Axios** and **Django** for API handling and **PostgreSQL** for data storage.
- Held weekly stand-up meetings and mentor members while ensuring consistent progress through Agile framework and Jira board.

PROJECTS

ProfMatch — September 2023 - October 2023
- Collaborated in a four-person team to create a full-stack website, using **Pandas** and **Python** to design an algorithm providing personalized professor recommendations, scores, rankings, and visualizations from a Kaggle dataset of Texas A&M course evaluations.
- Engineered the front end using **Next.js** and tailwind **CSS**, while handling API calls with **Axios** library and **Flask**.
- Achieved 2nd out of 54 teams at the 2023 HowdyHack hackathon, earning recognition in the Texas A&M Engineering *Ingenium* blog.
- Deployed service to Vercel and Render in October 2023, earning 3000+ page hits from 500+ visitors since.

Engineering Honors Project — September 2022 - April 2023
- Collaborated on application using KNN, SVM, and Random Forest to predict Texas A&M Engineering Honors activity participation.
- Created dashboard with **Streamlit** and **Python,** dynamically visualizing event attendance and turnout for 6 semesters and 40+ events.
- Established **Sqlite3** database for storage and developed dashboard interface for streamlined database management.

SKILLS

Languages: Python, Java, C++, C#, HTML, CSS, SQL, Lua, Javascript, Typescript, Clojure
Technologies: React.js, Next.js, Node.js, Express.js, MongoDB, Flask, Django, TensorFlow, PyTorch, Scikit-learn, Git
Coursework: Data Structures, Computer Organization, Discrete Mathematics, Linear Algebra, Multivariable Calculus, Algorithms, Machine Learning, Data Science, Database Systems