Darren Chen

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EDUCATION

California University of Fullerton   Fullerton, CA
Bachelor of Science in Computer Science   *Expected Completion: May 2025*

EXPERIENCE

Undergraduate Data Science Research   May 2024 – July 2024
CSU Fullerton   *Fullerton, CA*
- Conducted comprehensive analysis of social media usage patterns across multiple platforms (Instagram, Twitter, Facebook, LinkedIn) using **Python**, **pandas**, and **NumPy** to identify correlations between engagement metrics and emotional well-being.
- Implemented **K-means clustering** and **multi-layer neural networks** with **TensorFlow/Keras** to categorize users and predict emotional states with 84 percent accuracy, applying **feature scaling** and **categorical encoding** techniques.
- Created detailed visualizations with **matplotlib** and **seaborns** to illustrate platform-specific usage patterns and emotional responses, enabling **data-driven insights** on the relationship between social media engagement and psychological outcomes.

PROJECTS

WikiGuess (1st Place CSUF Hackathon) | *GitHub Link* | *Website Link*   *April 2023*
- *Python, Flask, HTML, CSS, JavaScript*
- Developed a **full-stack web game** that challenges users to identify real Wikipedia articles when presented alongside convincing, AI-generated fake excerpts using OpenAI's text generation API.
- **Won 1st place** in the ML/AI category at the FullyHacks hackathon by collaborating with a team of 3 other developers.
- Contributed to the web development of our project focused on building the frontend using HTML, CSS, and JavaScript. Implemented responsive design and interactive features to create an intuitive user interface.

IgnitionLink | *Website Link*   *December 2024 - Present*
- *React, FastAPI, Firebase, Material-UI, Vite, SASS*
- Built a full-stack social media platform for car enthusiasts with user profiles, car listings, and community features.
- Developed a FastAPI backend with RESTful APIs to handle car data, posts, likes, and comments efficiently.
- Integrated Firebase for secure authentication and real-time updates, enhancing user experience and data sync.
- Designed interactive UI components and social tools to support user engagement and automotive community growth.

BallKnower (WIP) | *Live Demo - In Progress*   *March 2025 - Present*
- *Next.js, React, Python, PostgreSQL, Docker, Docker Compose*
- Collaborated with a teammate to design and deploy a full-stack sports betting analytics and arbitrage platform to help users identify the best betting lines across sportsbooks.
- Designed a Python pipeline for ingesting and storing sportsbook data in a PostgreSQL database.
- Containerized all components using Docker and orchestrated with Docker Compose to support seamless development and production deployment.

RELEVANT COURSEWORK

Data Structures and Algorithms: C++, Python
Web Development: Full Stack Web Development, Front-end Frameworks (React), Back-end Frameworks (Node.js, Flask)
Operating Systems: C++, C, Processes and Threads, Memory Management, I/O
File Structures and Databases: SQL, MySQL, MariaDB, Postgres

TECHNICAL SKILLS

Languages: Python, C/C++, Type/JavaScript, HTML/CSS, SQL
Frameworks: React, Next.js, Flask, FastAPI
Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, Docker