

Brandon Ng

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EDUCATION

B.S Data Science in Machine Learning and AI
University of California, San Diego

Expected Graduation: June 2026

GPA: 3.83

Relevant Coursework: Principles of Data Science, Statistical Methods, Practice of Data Science, Exploratory Data Analysis and Inference, Computer Systems and C, Intro. Data Management, Discrete Mathematics, Vector Calculus, Linear Algebra, Data Structures and Algorithms, Computer Architecture, Probability and Statistics, Theoretical Foundations of Data Science I & II

EXPERIENCES

Tech4Good Lab

Back-End Web Developer Team Lead under Professor David Lee

Jun 2023 – Sep 2023

- Mentored and led a team of 10 novice back-end developers for the development of ExploreCareers, cultivating proficiency in RxJS, Angular, and TypeScript technologies and enhancing team capabilities and individual growth
- Orchestrated team demonstrations, conducted comprehensive code reviews, and provided constructive feedback to elevate code quality, foster skill development, and cultivate a culture of continuous learning within the team.
- Facilitated open communication and collaborated effectively with cross-functional teams to discuss over 10 project designs and milestones, ensuring the successful stitching of over 15 components and efficient management of tasks and goals
- Revamped the website schema and Firebase by creating over 20 new fields and 3 new entities within the database to ensure alignment with the necessary requirements and objectives of the website blueprints

Back-End Web Developer under Professor David Lee

Jan 2023 – Jun 2023

- Utilized dispatch functions and data models to efficiently create and populate data within the Cloud Firestore backend database, creating over 50 entities to test web features and component functionality before launch
- Leveraged and employed RxJs and NgRx functions to create 4 dynamic and interactive UI across multiple webpages and projects, efficiently retrieving, initializing, listening to, and asynchronously updating user data on Firebase
- Refined and enhanced 3 selector functions to optimize data retrieval for web pages, ensuring precise and desired results through meticulous creation of example data and rigorous testing
- Implemented BehaviorSubjects, Subjects, and Observables to create over 10 asynchronous functions across multiple pages

Front-End Web Developer under Professor David Lee

Sep 2022 – Jan 2023

- Utilized HTML, CSS, Typescript, and Angular to successfully design, develop, and deploy over 5 high-quality UI components
- Constructed and implemented dynamic and static UI components for 2 pages of Dynamic Surveys, a job survey platform
- Revamped and modernized the user interface for the Gratitude platform, resulting in a refined and improved user experience

PROJECTS

Plant Disease Detector

Python

- Designed and implemented a CNN architecture using PyTorch, to classify leaf images and detect diseases across plant species
- Optimized data loading and preprocessing pipelines with DataLoaders and CV, improving training efficiency and scalability.
- Fine-tuned and optimized parameters, achieving a 77% accuracy rate in classifying diseases within 38 plant disease categories

UCSD SET Scraper

Python

- Developed a Python script using Selenium WebDriver to automate login and data scraping from the UCSD SET website
- Utilized BeautifulSoup to parse HTML content and extract information, ensuring accurate and efficient data collection
- Compiled and cleaned course evaluation data from Fall 2023 onwards into a well-structured Pandas DataFrame, providing a streamlined and ready-to-use dataset for further analysis or integration into data science and app development projects.

Culinary Insights

Python

- Conducted exploratory data analysis on recipes from Food.com, employing data cleaning techniques and hypothesis testing
- Created a Random Forest clustering model using Scikit-learn to predict recipe healthiness using 8 different nutritional features.
- Leveraged optimization techniques such as grid search to enhance model performance, evaluated using F1 scores, precisions, and recalls to identify opportunities to improve accuracy, stability, and fairness

SKILLS & CERTIFICATES

Programming Languages: Java, Python, C, C++, JavaScript, TypeScript, Swift, Assembly, R, Object-Oriented Programming

Frameworks/Platforms/Libraries: Angular, Firebase, Node.js, Keras, TensorFlow, Pandas, Scikit-learn, SQL, NoSQL, Numpy

Tools/Markup Languages: HTML, CSS, Github, Git

Certificates: Google Cloud Essentials, Codepath Intermediate IOS Development course