LE "LOUIE" CAI

me@louiecai.com • (475) 298-7585 • San Diego, CA • Website • LinkedIn

I am an undergraduate student at UC San Diego studying Data Science with a strong foundation and interest in machine learning, software development, and data analysis, enhanced by practical experience through internship and projects.

EDUCATION

University of California, San Diego, Data Science B.S.   **Sept 2020 – Jun 2024 (Planned)**

- **GPA**: 3.7
- **Minor**: Computer Engineering
- **Relevant Coursework**: Machine Learning, Deep Learning, NLP, Data Analysis, Computer Organization and Systems Programming, Data Structures & Object-Oriented Design, Differential Equations, Linear Algebra, Probability and Statistics, Discrete Mathematics, Components and Design Techniques for Digital Systems

EXPERIENCE

Software Development Engineer Intern – Amazon   **Jun – Sept 2023**

- Utilized React and TypeScript to streamline backend database onboarding with a front-end internal tool.
- Collaborated in an Agile team to ensure responsive and user-friendly interfaces.
- Reduced the onboarding process from 2-3 days to several hours through streamlining with this tool

CSE Tutor – UC San Diego   **Sept – Dec 2023**

- Held office hours and helped students with their questions
- Automated the generation of class grades from different sources

PROJECTS

Tiktok Reddit Video Automator (GitHub)   **Aug – Dec 2022**

- Developed a Python-based automation tool for downloading trending videos from various subreddits using Reddit's API, and for uploading them to TikTok using Selenium.
- Configured and deployed the script on a server for automated video posting, featuring customizable options like rest intervals and subreddit targeting.

Convolutional Neural Network Image Classification (Analysis)   **Feb 2022**

- Engineered custom convolutional neural networks using PyTorch to classify 20 distinct categories of food images.
- Led the development and training of the neural network with PyTorch and CUDA, systematically refining network performance through architectural adjustments and hyperparameter tuning.
- Visualized and conducted in-depth analysis of feature maps and filters using Matplotlib.

Minecraft Mod Development (GitHub)   **Jun – Dec 2020**

- Achieved over **2.9 million** downloads on CurseForge for the Minecraft plugin developed.
- Engineered a plugin to enhance the player experience in Minecraft by introducing interactive in-game items.

ACTIVITIES

IEEE F1TENTH IV2023 Championship - Anchorage (Website)   **Jun 2023**

- Constructed two autonomous 1/10 scale RC cars, each equipped with LiDAR sensors and cameras, enabling precise navigation on a racetrack.
- Led the development of advanced navigation algorithms using ROS2 and DonkeyCar.
- Represented UC San Diego and secured fourth place in the championship.

SKILLS

- **Programming Languages**: Python, R, SQL, HTML, CSS, Typescript, Java, System Verilog, C, C++, C#, Bash,
- **Machine Learning/Big Data**: Machine Learning, Deep Learning, pandas, NumPy, matplotlib, scikit-learn, PyTorch, BeautifulSoup4, Request, Selenium, Plotly, FastAPI
- **Framework/Tools**: React, JavaFX, Unity, Linux, Docker, Blender, Gradle, Vim, Git, Jupyter, Verilator