Harry Leung

Software Engineer
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Education

University of California - Irvine Irvine, CA
Bachelor of Science in Computer Science, In Progress *Sept. 2021 – June 2025*

Work Experience

Software Engineering Intern June 2023 – Sept. 2023
LitePoint *San Jose, CA*

- Developed a user-friendly GUI tool to display regression tester values, enhancing data visualization and decision-making.
- Implemented Apache Cassandra to optimize storage and retrieval of regression tester data, maximizing data reliability and reducing query response time by over 96%.
- Designed and created an intuitive and responsive GUI using Tkinter, improving user interaction and reducing the learning curve for the team.
- Integrated Matplotlib for data visualization, enabling the creation of insightful charts and graphs to enhance data analysis.
- Significantly improved team efficiency by deploying the tool, facilitating quicker decision-making and higher-quality regression testing outcomes.

Projects

Machine Learning Projection Model | *Machine Learning, BeautifulSoup, OpenCV, Scikit-learn, pandas*

- Developed a Python-based machine learning "Expected Value" model for professional esports games to process historical game data and predict future outcomes.
- Applied the BeautifulSoup library to scrape historical data from the web and worked with OpenCV and pandas libraries to process raw data into an accessible dataframe.
- Implemented Random Forest regression using Scikit-learn to use individual players' past performances in order to return projected stats for a future match.
- Successfully applied the algorithm in daily fantasy sports to pick more or less for a given player's projection, achieving 60% accuracy over predicted market analysis.

Distributed Social Network User Client | *Python, Tkinter, Socket Programming*

- Designed and implemented a user client for a distributed social network with an interactive GUI using Python Tkinter
- Developed a robust messaging feature within the user client, enabling users to exchange direct messages efficiently and securely, enhancing user engagement and interaction.
- Utilized socket programming to facilitate the publishing of profile information and blog posts, ensuring efficient and reliable data exchange within the distributed network.

Checkers AI | *Python*

- Designed and implemented AI "smarts" for the game of checkers, developing strategic game-playing capabilities.
- Utilized the Monte Carlo Tree Search algorithm to optimize gameplay strategies, leveraging Python for implementation.
- Developed an evaluation system to analyze the AI's performance and improve its decision-making algorithms, achieving a win rate of 100% against traditional heuristics-based AI opponents and humans, and 75% against other similar AI opponents.

Technical Skills

Languages: Python, C++, JavaScript, HTML
Developer Tools: React.js, Next.js, Tailwind CSS, Git, GitHub, mySQL, PostgreSQL, MongoDB

Personal Skills

Spoken Languages: English, Cantonese, Mandarin