Harry Leung

Software Engineer
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Education

University of California, Irvine Sep. 2021 – Jun. 2025

Bachelor of Science in Computer Science, In Progress

Relevant Coursework: Neural Networks & Deep Learning, Operating Systems, Database Systems
Artificial Intelligence, Machine Learning, Information Retrieval, Data Structures & Algorithms, Networks

Work Experience

Software Engineering Intern, QA Automation Jun. 2023 – Sep. 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 graphs to enhance data analysis.
- Improved team efficiency significantly by deploying the tool, facilitating quicker decision-making and higher-quality regression testing outcomes.

Projects

ICS Web Crawler | Python, Web Crawling, Distributed Systems

- Configured a scalable web crawler leveraging a spacetime cache server for distributed URL fetching on the UC Irvine ICS domain.
- Implemented custom scraper rules to filter, parse, and enqueue valid web URLs.
- Designed flexible architecture with re-definable frontier and worker classes for multi-threaded crawling.
- Enforced configurable politeness delays to comply with server request limits.

ICS Search Engine | Python, Information Retrieval, TF-IDF, Multi-threading

- Engineered a high-performance search engine for indexing and retrieving UC Irvine ICS web documents.
- Developed an inverted index with TF-IDF scoring and HTML tag importance weighting.
- Implemented cosine similarity–based near-duplicate detection to enhance result relevance.
- Optimized disk-based index storage to efficiently manage large-scale datasets.

AI Art Detector | Python, Deep Learning, PyTorch, Transformers

- Designed deep learning pipelines to distinguish AI-generated images from human-created artwork.
- Built and trained custom CNN and Vision Transformer models for binary image classification.
- Implemented data augmentation, normalization, and experiment tracking using WandB.
- Optimized training routines to compare model performance and achieve robust classification accuracy.

Skills

Languages: Python, C++, C, Rust, JavaScript, Typescript, Go, Java, Swift, x86/ARM Assembly, SQL, HTML
Libraries: Keras, NumPy, LLVM, OpenGL, React, Node.js, Redis
Developer Tools: Git, Linux, Docker, Bazel, CMake, Makefile, CI, Valgrind, GDB, Radare2, Tracy, libfuzzer, ASAN, React.js, Next.js, Tailwind CSS, Git, GitHub, mySQL, PostgreSQL, MongoDB
Spoken Languages: English, Cantonese, Mandarin