Monique Wong

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https://github.com/LYMoniqueWong

Education

Computer Science and Linguistics, B.A. *Expected Dec 2026*

- University of California, Los Angeles
- Relevant Coursework: Computational Linguistics, Artificial Intelligence, Machine Learning, Data Mining, Data Management Systems, Algorithms and Complexity, Computing Theory, Software Construction

Work Experience

Software Engineer Intern

ASTRI- HK Applied Science and Technology Research Institute; Hong Kong *June 2023 - August 2023*

- Performed advanced data analysis, extraction, and manipulation tasks utilizing NumPy and Pandas.
- Developed a robust automation script in Python and streamlined the process of creating SQL tables from Excel spreadsheets, improving efficiency and accuracy.
- Created a comprehensive test automation framework employing Selenium, enabling realistic simulations of skimming bank sites and ensuring thorough testing and validation of critical functionalities.
- Led the design and development of an interactive game featuring an intelligent avatar system. Leveraged cutting-edge technologies such as AIGC, stable diffusion, speech recognition.
- Optimized performance and achieved exceptional results in NLP models, enhancing overall system capabilities through close collaboration with cross-functional teams to craft highly effective prompts.

Technologies and Languages

- Python, JavaScript, C++, Haskell, Typescript, SQL, HTML, CSS, Lisp, Mandarin Chinese, Cantonese
- MongoDB, Mongoose, Express, ReactJS, Node.js, Pandas, NumPy, AI, Machine Learning, Data Mining, Prompt Engineering, NLP, PostgreSQL, MySQL, Docker, NumPy, Pandas, Selenium, Git, Linux, Shell, GitHub/ Git, Agile

Projects

WhoIsWho-IND KDD 2024 (Machine Learning)

- Enhanced baseline model accuracy by 6% through the development of a refined algorithm to detect incorrect paper assignments. Analyzed attributes of over 60,000 testing cases to optimize the detection process.
- Leveraged advanced techniques such as precise prompt formulation and applied few-shot training on cutting-edge Large Language Models including Google Gemini and ChatGLM. Successfully modeled complex relationships between authors and their publications, resulting in improved understanding and performance.
- Designed Graph Convolutional Networks to optimize resource utilization and enhance the integrity of intellectual property. Achieved optimal performance levels while reducing computational resources required for processing and analysis.

Text Corpus Maximizing Model (Natural Language Processing)

- Spearheaded the development of a natural language model capable of defining probability distributions over strings and proficiently recognizing formal languages.
- Designed and implemented a Probabilistic Finite State Automaton and an Expectation-Maximization algorithm, enabling the identification of maximum likelihood estimates for English sentences within a language corpus.
- Achieved a 99% accuracy in modeling language acquisition through the application of advanced machine learning methods, contributing to improving language understanding and processing capabilities.

Expense Tracking Application (Full-stack)

- Built a robust expense tracking application utilizing the MERN Stack.
- Designed and implemented a highly efficient REST API, enabling CRUD operations for managing expenses and incomes across multiple categories.
- Ensured optimal functionality and reliability of application by conducting thorough testing of API endpoints using Postman.
- Developed a dynamic and interactive UI using ReactJS, and engineered key features to analyze expense data.

YouTube Music to Spotify Automation

- Automated the addition of YouTube music to Spotify playlists using Python.
- Utilized YouTube Data API to search and list songs from user's YouTube playlist.
- Employed Youtube dl library to extract track and artist names.
- Created playlists in users' Spotify accounts using Spotify API.