

Sasipriya Ayyanan

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Education

Systems design engineer from University of Waterloo
(BASc., 2023 Graduate)

Skills

Programming languages and tools

1. Python
2. SQL
3. HTML, CSS, React.js
4. C++
5. Matlab
6. Java

Data science libraries and tools

1. AWS
2. NumPy
3. Pandas
4. Matplotlib and Seaborn:
5. SciPy
6. Scikit-learn:
7. TensorFlow or PyTorch
8. Statsmodels
9. Keras
10. Langchain
11. Large language models (OpenAI, Llama2)

Other skills

1. Git
2. Data Visualization Tools: Tableau, Power BI

Experience

EvoluteIQ, London (Oct 2023 - present)

Gen AI engineer

- Independently conceived and executed a comprehensive HR bot powered by Llama2, taking charge of the entire development process from **concept to completion**. Employed a robust RAG (Retrieval-Augmented Generation) architecture, leveraging tools such as LangChain, FAISS (Facebook AI Similarity Search), and Haystack. This pioneering Proof of Concept (PoC) project played a pivotal role in **setting the trajectory for the company's future endeavors** in the GenAI field. The project was presented at the prestigious **Global Partnerships of Artificial Intelligence (GPAI) 2023 conference**. Responsible for research and development of a cutting-edge **Document Q&A AI bot** from scratch powered by GPT-3.5, Llama2 and open-source libraries such as LangChain and LlamaIndex, leveraging deep learning frameworks like TensorFlow for NLP tasks, while ensuring seamless integration and optimal performance.
- Prompt engineering, quantization, PEFT

EvoluteIQ, London (July 2023 - Sept 2023)

Machine learning engineer

- Engineered an incident management system, utilizing Python, TensorFlow, and NLTK libraries. Achieved a remarkable 35% accuracy enhancement via advanced EDA and NLP techniques on low-scale, imbalanced data. Demonstrated expertise in deep learning, model deployment, and data preprocessing, delivering impactful ML solutions.
- Known for adaptability and problem-solving abilities, demonstrated by taking over AWS processes with minimal documentation, deciphering connections, and successfully managing tasks and backlogs while documenting processes managing a dataset of over 8 million records for **Golf Digest, a Warner Bros.** product, to utilizing AWS data lake components such as S3, Athena, and Glue for efficient data processing and analysis

City of Mississauga, Mississauga ON (Jan 2021 - April 2021)

Project Management Intern

- As a Project Management intern, my responsibilities included utilizing Microsoft Office tools such as Microsoft Excel to analyze energy consumption data and create reports and graphs. I also managed the utility database, collecting and verifying equipment data for various systems, estimating energy consumption for new City facilities, and aiding in financial utility budgeting. Additionally, I monitored Building Automation Systems and live metering systems for abnormalities in energy consumption. Overall, this internship provided me with valuable experience in communication, management, and team leadership.

Medtronic Singapore (May 2020 - Aug 2020)

Data Analyst Intern

- As a Data Analyst and Product Management intern, I utilized technical skills to identify, analyze, and interpret trends and patterns in complex data sets using statistical techniques such as correlation analysis and data visualization tools like Alteryx and Tableau. I conducted task analysis and provided recommendations to improve product efficiency based on data insights. My proficiency in data analysis and visualization tools allowed me to make data-driven decisions, contributing to the success of the product.

Veriday, Mississauga, ON (Sept 2019 - Dec 2019)

Front end developer co-op

- As a front end developer intern, I worked with responsive web interfaces using HTML5, CSS, Bootstrap and React.js in Liferay Portal platform. Implemented programming functionalities and optimized layouts to meet usability and performance requirements. Participated in code reviews, maintained code repositories in GIT, and followed agile development methodologies. Utilized programming skills to troubleshoot and fix bugs diagnosed upon testing client websites built with liferay dxp technology.

Long term project

Document AI chatbot

- Architecture Innovation: I led the design of a comprehensive architecture, optimizing it for the demands of Document Q&A, ensuring seamless document retrieval and Q&A functionalities.
- Model Training: I trained and fine-tuned the chosen LLM (openAI), enabling it to excel in document-based Q&A scenarios.
- Performance Enhancement: My contributions extended to performance optimization, increasing efficiency, speed, and accuracy.
- Quality Assurance: I implemented rigorous testing procedures, ensuring consistent, contextually relevant answers from diverse document sources.

University of Waterloo, Waterloo ON

Final year capstone

- Final year project incorporating programming skills in C#, C++, Java along with UX, UR, and human factors to design a VR game using Unity aimed at improving cognitive fitness for older adults and optimizing the game mechanics to enhance user engagement and experience, building a music recommender system using machine learning filtering techniques.