Sunil M. Rosen

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EDUCATION

Georgetown University August 2022 – May 2026
B.S Computer Science • B.A Economics • 3.92/4.00 GPA Washington, D.C
DIS Study Abroad Copenhagen • Concentration in Artificial Intelligence August 2024 – December 2024

Relevant Coursework: Data Structures • Mathematical Methods • Advanced Programming • Multivariable Calculus • Computational Structures Artificial Intelligence • Computational Analysis of Big Data • Artificial Neural Networks and Deep Learning • Tech, Ethics and Society

SKILLS

- **Programming Languages:** C++, Python, Go, HTML
- **Frameworks/Tools:** React.js, TensorFlow, Figma, Jenkins, Git/Version Control
- **Cloud Infrastructure:** Kubernetes, Docker, Amazon Web Services(AWS)

WORK EXPERIENCE

Acquia June 2024 – August 2024
Software Engineering Intern Boston, MA

- Collaborated closely with an **Agile Scrum** team to deliver product increments using **Go**, **Kubernetes**, **Docker**, and **AWS services**, completing a full release cycle from testing in a development environment to deploying in a production environment
- Removed apache-exporter for customers running PHP 8.1+ due to newly added support for the PHP-FPM status page, **reducing production footprint by over 142 vCPUs & 830GB of Memory**
- Implemented tooling to increase minReplicas in a **Kubernetes** rollout, unlocking increased capabilities for high traffic customers that range up to over **100** pods

Hoya Developers August 2023 – Present
Software Engineering Intern (1 of 50 inaugural members) Washington, D.C

- Worked on the development of a website for Map Collective, a project focused on using AI-driven data to track intricate geographical emissions data throughout supply chains
- Contribute to the creation of a user-friendly interface with **Figma** and a **React** framework, creating **20+ toolkits and dashboards**

TECHNICAL PROJECTS

ParlAId: A Machine Learning NBA Parlay Builder December 2024

- Created a machine learning model leveraging correlations in player and team performance metrics to optimize over/under NBA parlay bets, using data from 2023-24 and 2024-25 seasons scraped via The Odds API and Basketball Reference
- Preprocessed data with one-hot encoding for players and teams, combined contextual game and player stats into unified vectors, and utilized TensorFlow for model training and evaluation, achieving an accuracy score of **57%** which is a slight edge over 50/50 DraftKings bets
- Built a full-stack web application integrating Python, Flask, and SQLite for our backend, with React and TypeScript as our frontend

WikiNews Search Engine October 2024

- Developed a **Retrieval-Augmented Generation** (RAG) pipeline integrating Wikipedia and NewsAPI data to create a comprehensive knowledge base for accurate and context-rich LLM responses
- Implemented **FAISS-based vector search** using HuggingFace and LangChain to embed, index, and retrieve relevant documents from combined static and real-time data sources
- Optimized LLM-driven query answering by constructing dynamic prompts with retrieved content and deploying a lightweight model using Transformers and PyTorch for efficient text generation

HomeBudget July 2024

- Created HomeBudget, a personal expenses tracking web application using a **React** framework, enabling users to manage multiple budgets and track expenses easily
- Designed and implemented key features such as multiple budget management, expense tracking, and detailed budget overviews

CERTIFICATIONS/AWARDS

Amazon Web Services Certified Developer Associate July 2024

- Demonstrated expertise in developing, deploying, and debugging cloud-based applications using **Amazon Web Services**, leveraging key services such as AWS Lambda, DynamoDB, and API Gateway

George F. Baker Scholar – Georgetown University April 2024

- Selected as 1 of 9 students annually for exceptional academic performance and leadership potential, with an emphasis on applying technology and data-driven solutions to business and societal challenges

INTERESTS

- Basketball (Georgetown Club Basketball Team), Dining (ranked ~450 restaurants), Traveling, Chess, Skiing, Cooking