SOWMIYANARAYAN SELVAM

GitHub: github.com/SowmiyanarayanSelvam ◇ Website: www.sowmiselvam.com
Phone: +1(732) 322-5923 ◇ Location: New Brunswick, NJ
Mail: selvamsowmiyanarayan@gmail.com ◇ LinkedIn: www.linkedin.com/in/sowmiyanarayan-selvam

EDUCATION

- **Master of Science Computer Science**, Rutgers University - New Brunswick, NJ, USA. September 2022 - May 2024
  Relevant Coursework: Machine Learning, Computer Vision, Robotics, Software Engineering. **Grade:** 3.78/4.0
- **Bachelor in Computer Science and Engineering**, Amrita Vishwa Vidyapeetam, TN, India. July 2018 - August 2022
  Relevant Coursework: Internet of Things, SOA, Software Project Management, Compiler Design. **Grade:** 8.72/10.0

TECHNICAL SKILLS

- **Languages and Frameworks:** C, C++, Python, Java, PHP, Laravel, Flask, JavaScript, Node.js, React.js, HTML, CSS.
- **Tools and Technologies:** SQL, NoSQL, Dockers, Containers, Jenkins, JSON, RESTful API, Jasmine, Selenium, Serverless.
- **Clouds and Platforms:** AWS(SQS, SES, Batch, Lambda, DynamoDB, Step Functions), GCP, Windows, Linux, macOS.

RELEVANT EXPERIENCE

SDE Intern June 2023 - July 2023
SPAN Technologies — Tech: NodeJS, MongoDB, SES, SQS, Lambda, DynamoDB, EventBridge, REST APIs. *Coimbatore, India*

- Orchestrated optimization efforts with a five-member developer team, resulting in a 35% reduction in build times through refactoring inefficient code and improving the overall user experience for a website of an IRS Authorized E-file provider.
- Designed and built a mail scheduling module using Node.js and MongoDB, saving 15 hours of human resources per week.

Data Analyst February 2023 - July 2023
Department of Agricultural, Food, and Resource Economics, Rutgers.— Tech: Stata, Excel, Word. *New Brunswick, NJ*

- Cleaned dataset of 1247 survey entries using Excel and correlated data by producing reusable code in Stata and improved the efficiency of tabulating the data by 50%.
- Co-authored a data analysis report, outlining a methodology that increased data accuracy by 15% and incorporated data visualization techniques. Reviewed and edited documentation to ensure a submission-ready report to USDA.

ACADEMIC PROJECTS

Legged Robot Locomotion — Tech: Python, PyTorch, Tensorflow, Isaac Gym, Reinforcement Learning. December 2023

- Remodelled a Neural Network policy for an Open Source GitHub project and trained a quadruped robot to navigate through hallways using Actor-Critic and Proximal Policy Optimization Algorithms.
- Created a reward function that rewarded and penalized the robot to reach the goals by avoiding walls and obstacles.

MyBookPal — Tech: HTML, CSS, JavaScript, NodeJS, MySQL, Jasmine, Postman. November 2023.

- Built an online book lending and auction system, achieving a 40% reduction in bid comparison computations and ensuring efficient user interactions.
- Spearheaded 12 peers with agile methodologies to realize an interface with optimized integration of APIs, developed and tested.

Customer Care Call Optimization — Tech: HTML, CSS, Python(Flask, Librosa, Pyaudio, Sklearn). May 2023

- Designed a web-based framework enabling an emotion analysis model for emotion-based call routing. Implemented automated grading for service professionals. Demonstrated a 25% increase in accuracy in emotion classification during testing.
- Achieved 84.72% accuracy using a neural networks classifier to identify emotions from audio and visualized 10 epochs utilizing a model for Text sentiment analysis from the complaint received from the customer through a chatbot.

RESEARCH

Analysis and Testing of Containers, Springer Series 2022 [In press].

- Conducted a study on the applications and advantages of containers in running applications, showcasing the portability across platforms and consolidation of dependencies.
- Demonstrated superior long-term performance and consistency of container-based systems through data analysis of dataset generated by tracking 500k network responses and requests.