SOWMIYANARAYAN SELVAM

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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
- **BTech in Computer Science and Engineering**, Amrita Vishwa Vidyapeetam, 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

SPAN Technologies *Coimbatore, India*
Software Engineer Intern — Tech: MERN, SES, SQS, Lambda, DynamoDB, EventBridge, REST APIs. June 2023 - August 2023

- Orchestrated optimization efforts with a senior 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.

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

- Cleaned dataset of 1247 survey entries using Excel and correlated data by producing reusable code in Stata and co-authored a data analysis-ready report for a USDA project, documenting the methodology and data visualization techniques utilized.

Mazenet Solutions *Coimbatore, India*
Software Engineer Intern — Tech: React.js, Node.js, Javascript, MySQL, Selenium, JIRA. December 2021 - August 2022

- Collaborated with a developer team for six months, actively contributing to a web application's development and testing phases. Enhanced the website's overall security posture by identifying security vulnerabilities.
- Harnessed JIRA for task management and spearheaded automation efforts over three months, resulting in a measurable 20% reduction in processing time. Specifically, implementing continuous integration practices streamlined development processes.

Software Engineer Intern — Tech: C++, Python, Flask. June 2021 - August 2021

- Completed a training program emphasizing writing clean, efficient code and gaining skills. Developed mini projects using various web development frameworks, honing practical expertise.

ACADEMIC PROJECTS

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

- Remodeled 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 for reaching 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.