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https://github.com/Atvempa | https://atvempa.github.io/aneesh_portfolio/

Professional Summary:

A highly skilled software developer with expertise in machine learning, web development, cloud technologies, and automation. Proficient in data structures and algorithms, modern frameworks, and APIs, with a proven track record in designing scalable solutions and optimizing processes. Experienced in AI-driven innovations and full-stack application development, with a focus on enhancing user experience and driving impactful results.

Technical Skills:

- **Programming Skills:** SQL, Python, Java Script, Type Script, C, C++, Java, HTML, CSS, SOQL, MATLAB, Simulink, LabVIEW, Data Structures and Algorithms, OOP's Concept, Android Studio, Xcode
- **Technical Skills:** Generative AI, Machine Learning, Deep Learning(CNN, LSTM, GRU), Full Stack Development, Selenium Automation (Using python), Natural Language Processing, Computer Vision
- **Frameworks and Libraries:** React, Angular, Spring Boot, Express JS, MongoDB, MySQL, TensorFlow, PyTorch, Lang Chain
- **Cloud platforms**: AWS (EC2, S3, DynamoDB, Cloudwatch, AWS Lambda, VPC, Cloud Formation, Route 53), Salesforce
- **Other:** RESTful APIs, OAuth, Microservices Architecture, Kubernetes, CI/CD pipelines, Git, Power Bi, Agile, JIRA

Experience:

Research Assistant: Algorithms
University of Massachusetts, Lowell, Massachusetts | Feb 2024 – Till Date

- Collected and processed IMU data from FES sessions and developed visualization tools to reconstruct joint movements for detailed motion analysis. and Building classification algorithms in C++ using Discrete Fréchet Distance and DTW.

Data Analyst Intern
University of Massachusetts, Lowell, Massachusetts | Apr 2024 – Till Date

- Automating workflows using Python, streamlining operational processes and generate regular reports, effectively meeting business requirements.
- Designed and optimized SQL queries for efficient data retrieval.
- Implementing Machine Learning Algorithms to analyse student data.

Research Assistant: Machine Learning
University of Massachusetts, Lowell, Massachusetts | Feb 2024 – Dec 2024

- Conducted data pre-processing, feature extraction (audio spectrograms), and development of deep learning models (CNN, LSTM, GRU) for mosquito species prediction using wingbeat sounds.
- Achieved the best results for the dataset, significantly improving prediction accuracy; currently working on publishing a paper detailing the methodology and findings.

Software Development Engineer
Amazon, India | Sept 2022 – Dec 2023

- Enhanced Alexa Third-Party Registration WebApps, boosting registered endpoints and customer engagement, and contributed as a Full Stack Developer in end-to-end software lifecycle using AWS and CI/CD pipelines.
- Developed CloudWatch dashboards for backend monitoring, performed integration and load testing with AWS Lambda, and optimized a backend service for improved performance and visibility.

Research Engineer: Machine Learning
Mobis Technical Center of India (Hyundai Mobis R & D), India | Feb 2021 – Aug 2022

- Developed Machine Learning (Random Forest, SVM) and Deep Learning models (CNN, GRU) for vehicle property estimation and implemented them in ECUs using C and MATLAB/ Simulink.
- Automated CarSim tool and created scripts for various automation tasks to enhance efficiency in vehicle modelling and prediction.

Education:

- **Master of Science in Computer Science –** (Expected Graduation **12/2025**)
  University of Massachusetts Lowell, MA

Projects:

- **Conversational AI with RAG (Chatbot URL):** Implemented a chatbot using Retrieval-Augmented Generation (RAG) techniques. Utilized Lang Chain library**,** Integrated MongoDB and Salesforce API, Leveraged OpenAI APIs.
- **AI powered Medical Scribe:** Developed the tool that processes doctor-patient audio conversations to generate accurate SOAP notes. Utilized OpenAI APIs for speech-to-text conversion and SOAP note generation.
- **Full-Stack Web Applications Using MERN Stack (MongoDB, Express.js, React, Node.js):** – **Travel APP, Shikshana.**
- **Application Development with Angular: Todo web application.**
- **Stress Tracker App** - Transformer Model | Android Studio
- **Classification of Mosquito Species** - Using DenseNet Architecture