

Harish Muthyala

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EDUCATION

Master's of Science in Computer Science , <i>University of Houston</i> <i>Machine Learning, Generative AI, Advanced Operating Systems</i> GPA: 3.8/4.0	Aug. 2024 – May 2026 <i>Houston, TX</i>
Bachelors in Computer Science , <i>Vellore Institute of Technology</i> <i>Design of Algorithms, Computer Networks, Artificial Intelligence</i>	Jul. 2018 – Apr 2022 <i>Vellore, India</i>

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL (Postgres, DynamoDB), JavaScript, HTML/CSS, R
Frameworks: Langchain, RAG, MLOps, Tensorflow, pandas, Numpy, Agents, React, Node.js, Flask, FastAPI
Cloud: AWS S3, Lambda, Sagemaker, Bedrock, EC2, ECS, VPC, Codepipeline, Quicksight, Azure Foundations
Developer Tools: Git, Docker, Kubernetes, Postman, VS Code, Jupyter
Credentials: AWS Solutions Architect - Associate, Accenture Trailblazer Award, AWS Article, Hawks Scholarship

EXPERIENCE

Generative AI Engineer <i>Senior Analyst, Accenture AWS Business Group (AABG)</i>	May 2023 – July 2024 <i>Hyderabad, India</i>
<ul style="list-style-type: none">Built an OpenSearch-based similarity scoring system with threshold filtering to handle irrelevant user queries in a GenAI credit underwriting RAG pipeline.Implemented OpenSearch Serverless vector DB to store embeddings generated via Titan model, structuring tabular client data from Excel for efficient retrieval.Designed few-shot and example-based prompt templates tailored to handle complex financial notations, utilizing claude sonnet, enhancing model accuracy by validating with Bedrock Playground.Engineered preprocessing pipelines using Pandas for data cleaning, chunking, and conversion, enabling robust and scalable ingestion of tabular financial data.	
Machine Learning Operations Engineer <i>Application Engineering Analyst, Accenture AWS Business Group (AABG)</i>	Aug. 2022 – Jan. 2024 <i>Hyderabad, India</i>
<ul style="list-style-type: none">Deployed a SageMaker Autopilot pipeline in a VPC to automate churn prediction and API-based inference.Maintained real-time model drift detection using SageMaker Model Monitor ModuleAutomated QuickSight Dashboard migration across AWS accounts, preserving access and datasets.	
Information Technology Project Analyst <i>Office of Information Technology, University of Houston</i>	Oct. 2024 – Present <i>Houston, TX</i>
<ul style="list-style-type: none">Handled Migration of IT services Tool from FootPrints to TeamDynamix, improving workflows and tracking.Partnered with teams to move networking assets from Access DB to TeamDynamix.Supported software rollouts like MedProctor and Point'nClick with requirement gathering.Replaced email-based requests with structured workflows for Business Requests and Change Management.	

PROJECTS

Model Context Protocol <i>Python, Claude, Research, Langchain</i>
<ul style="list-style-type: none">Conducted comprehensive research on MCP architecture for LLM communication and context managementAnalyzed protocol integration patterns with frameworks like LangChain and demonstrated real-world applicationsImplemented MCP client-server architecture enabling seamless LLM-application communicationCreated implementation examples showcasing file creation and Google Maps integration via MCP servers
Exploratory Data Analysis on Customer Churn Prediction <i>Random Forest, Python, Jupyter, Pandas, Git</i>
<ul style="list-style-type: none">Developed a customer churn prediction model for the telecom sector using RF algorithm with .92 accuracyConducted extensive exploratory data analysis to identify key factors influencing customer attritionImplemented machine learning techniques to calculate individual customer churn probability, enhancing retention strategies