

Vedavrath Pathi

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SUMMARY

AI Engineer with 3+ years of experience building production AI systems using Large Language Models, Retrieval Augmented Generation, Knowledge Graphs, and AWS cloud services. Experienced in developing enterprise document intelligence platforms, agentic AI systems, conversational AI applications, and cloud native ML solutions using Bedrock, LangGraph, Neo4j, OpenSearch, and SageMaker. Creator of AgenticML (PyPI: swayamml), an autonomous multi agent AutoML framework.

EXPERIENCE

GramX

Jun 2024 – Dec 2025

AI Engineer

India

- Built enterprise RAG applications using AWS Bedrock, OpenSearch, and vector databases to provide natural language access to organizational knowledge.
- Designed Graph RAG architectures using Neo4j Knowledge Graphs to connect project documentation, tickets, and business entities for contextual retrieval and reasoning.
- Developed multi agent workflows using LangGraph and LangChain for autonomous task execution, document analysis, and workflow automation.
- Implemented LLM powered enterprise search solutions integrating structured and unstructured data sources.
- Built cloud native AI services using AWS Bedrock, Lambda, SageMaker, and S3 supporting scalable enterprise AI workloads.

Minfy Technologies

Sep 2023 – Jun 2024

Machine Learning Engineer

Hyderabad, India

- Built an Intelligent Document Processing platform using Amazon Textract, Rekognition, Bedrock, and Comprehend for document classification, information extraction, and PII redaction.
- Achieved 100% document classification accuracy and 97% sensitive data redaction accuracy across enterprise financial document workflows.
- Developed an AI powered medical documentation platform generating SOAP notes, referrals, and consultation summaries with 94% transcription accuracy, reducing physician documentation effort by 80%.
- Implemented hybrid RAG based conversational AI systems improving retrieval relevance and recommendation accuracy by 20%.
- Developed SageMaker training and inference pipelines for fine tuning and deploying transformer based models.

Royal DSM

Jul 2022 – Sep 2022

Data Engineering Intern

Hyderabad, India

- Built data pipelines integrating SAP datasets with AWS analytics infrastructure supporting enterprise reporting and machine learning workflows.
- Performed large scale data transformation and validation for downstream analytics and business intelligence applications.
- Utilized AWS CDK to automate cloud infrastructure provisioning and deployment processes.

PROJECTS

AgenticML : Autonomous Multi Agent AutoML Platform (PyPI: swayamml)

- Developed an autonomous multi agent AutoML framework capable of executing end to end machine learning workflows directly from raw datasets.
- Built specialized AI agents for data profiling, preprocessing, feature engineering, model training, evaluation, and reporting.
- Published the framework on PyPI as **swayamml**, enabling one command execution of complete ML pipelines.
- Implemented agent orchestration workflows supporting collaborative decision making across regression and classification tasks.

Enterprise Graph RAG Platform

- Built a Graph RAG platform combining Neo4j Knowledge Graphs, vector embeddings, and Large Language Models for enterprise knowledge retrieval.
- Designed pipelines to extract entities, relationships, and metadata from documents, databases, and project management systems.
- Implemented natural language to Cypher translation enabling conversational access to enterprise knowledge.
- Improved contextual reasoning and reduced hallucinations by combining graph traversal with semantic retrieval techniques.

Insurance Knowledge Assistant and Email Automation Agent

- Developed an enterprise RAG platform for insurance policy retrieval, comparison, and recommendation across multiple policy documents.
- Implemented hybrid retrieval using vector search and metadata filtering to answer policy-specific customer queries.
- Built an AI-powered email agent capable of generating customer communications, claim responses, and policy-related correspondence.
- Integrated AWS Bedrock and enterprise knowledge repositories to deliver accurate context-aware insurance recommendations.

AWS Intelligent Document Processing Platform

- Built a serverless document intelligence platform using AWS Bedrock, Textract, Rekognition, Comprehend, Lambda, and Step Functions.
- Automated document classification, entity extraction, and PII redaction workflows for enterprise financial documents.
- Achieved 100% document classification accuracy and 97% sensitive information redaction accuracy during client evaluation.
- Designed event-driven processing pipelines supporting scalable enterprise document ingestion and analysis workloads.

SKILLS

Programming: Python, SQL, PySpark, FastAPI

Generative AI: Large Language Models, RAG, Graph RAG, Agentic AI, LangGraph, LangChain, Prompt Engineering, Tool Calling

Machine Learning: Machine Learning, Deep Learning, NLP, Computer Vision, AutoML

Cloud & MLOps: AWS Bedrock, SageMaker, Lambda, Step Functions, S3, Docker, CI/CD

Databases: Neo4j, OpenSearch, Pinecone, Weaviate, FAISS

Frameworks & Tools: Hugging Face, Git, REST APIs, Vector Databases

EDUCATION

Pace University

Master of Science in Data Science

New York, USA

2024 – 2026

Indian Institute of Information Technology Kottayam

Bachelor of Technology in Computer Science and Engineering

Kerala, India

2019 – 2023

CERTIFICATIONS

- AWS Certified Machine Learning – Specialty
- Microsoft Azure AI Engineer Associate (AI-102)
- AWS Certified AI Practitioner