PREMKUMAR M

# CONTACT

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**e**

## SKILLS

### Cloud Platforms:

AWS (SageMaker, Bedrock, Lambda, EKS, Glue, EC2, RDS, OpenSearch, Route 53, Certificate Manager, Load Balancer, Secrets Manager), Azure (basic)

**Backend Development & APls:** Python, FastAPI, Flask, REST API Development

### DevOps & Infrastructure

GitLab Cl/CD, Docker, Kubernetes, Terraform, Git, AWS EKS **Databases & Storage**

PostgreSQL, MySQL, AWS RDS,

OpenSearch, S3

### GenAI

LLMs, LangChain, Bedrock, SageMaker

### Data Engineering

Databricks, PySpark, SparkSQL, AWS Glue

### Data Visualization

Tableau (basic), custom dashboard integration (if applicable)

# CERTIFICATION

* Azure Certified Machine Learning

## SUMMARY

Backend and Dev0ps Engineer with 3+ years of experience specializing in GenAI application development and scalable backend solutions. Proficient in Python, FastAPI, PostgreSQL, Databricks, and a wide array of AWS services including SageMaker, Bedrock, 0penSearch, EKS, and Glue. Adept at building and deploying Al-powered applications and document search platforms with a strong foundation in Cl/CD and infrastructure automation. Passionate about crafting robust systems and driving innovation through automation and intelligent design.

**WORK EXPERIENCE**

### AGILISIUM CONSULTING (Al/ML Engineer & Backend Developer)

*[Nov 2022* - *Present]*

**Work Summary:** I work on building scalable GenAl-powered applications and backend systems using FastAPI, LangChain, 0penSearch, and AWS services like SageMaker, Bedrock, EKS, and Glue. My contributions include developing intelligent document search platforms with RAG-based architectures, creating robust APls, and integrating them with cloud infrastructure. I also handle Cl/CD automation using Gitlab, manage containerized deployments with Docker and Kubernetes, and automate infrastructure with Terraform. In addition, I've built Al-driven chatbots and delivery management solutions, while optimizing data pipelines using Databricks and PySpark for large-scale processing.

**Roles and Responsibilities:**

* Developed scalable backend services and APls using Python, FastAPI, and AWS.
* Built GenAl-powered solutions using LangChain, 0penSearch, and Bedrock with RAG architecture.
* Automated deployments and infrastructure using Gitlab Cl/CD, Docker, Kubernetes, and Terraform.
* Created data pipelines with Databricks, PySpark, and AWS Glue.
* Integrated LLMs into document search platforms and chatbots for intelligent retrieval.
* Ensured secure, high-performance backend systems and collaborated on end­ to-end solution delivery.
* Deployed ML models using SageMaker and managed real-time inference workflows.
* Monitored and optimized backend performance for reliability and scalability.

**Recognition:** Solutions Award (FY24)- Recognized for outstanding innovative solutions. Monthly Shining Star Award (SEP 2023)- Awarded for exceeding performance targets and exemplary teamwork.

# EDUCATION

Mohamed Sathak Engineering College, Kilakarai( 8.1 CGPA)

* + AWS Certified Solutions Architect - Associate

**B.E Computer Science Engineering**

*[2018* - *2022]*

**Projects**

**GenAI-Powered Document Search Platform Role:** Backend Developer

**Tech Stack:** AWS SageMaker, Bedrock, Redis, Milvus, FastAPI

**Description:**

* Designed and developed a GenAl-based document search solution using LLMs for semantic retrieval.
* Integrated vector databases (Redis, Milvus) to support intelligent search capabilities across unstructured content.
* Deployed in a client environment with scalable infrastructure and best practices for AWS security and performance.

**Automated Data Engineering Application Role:** Data Engineer & Backend Developer

**Tech Stack:** FastAPI, PostgreSQL, AWS RDS, EC2, 1AM, Secrets Manager, Gitlab Cl/CD

**Description:**

* Built a FastAPl-based backend for managing automated ETL pipelines and data workflows.
* Utilized AWS RDS and Secrets Manager for secure and scalable data storage and access control.
* Orchestrated deployments using Gitlab Cl/CD and managed infrastructure on EC2.

**Data Engineering Pipelines Using Databricks & AWS Role:** Data Engineer

**Tech Stack:** Databricks, AWS Glue, Redshift, S3, Tableau

**Description:**

* Developed and maintained ETL pipelines to process structured and semi-structured data at scale.
* Leveraged AWS Glue for transformation and Redshift for warehousing and analysis.
* Enabled data visualization and reporting using Tableau dashboards.

**Al-Powered Enterprise Chatbot Role:** Backend Engineer

**Tech Stack:** FastAPI, AWS OpenSearch Serverless, PostgreSQL, EKS, Gitlab Cl/CD

**Description:**

* Created backend APls to support chatbot interactions with dynamic search and data access.
* Implemented search functionality using OpenSearch Serverless for fast and scalable query responses.
* Deployed across dev, QA, and prod environments using EKS and Gitlab Cl/CD pipelines.