

Gayathri Prakash Menakath

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Indian — Born: 10 Feb 1996

Summary

Software Engineer with 3+ years of experience in full-stack web development, log monitoring, and data visualization. Skilled in delivering end-to-end solutions using JavaScript, TypeScript, and React, with a track record of building scalable, high-performance applications on AWS infrastructure. Committed to writing clean, secure, and maintainable code, with a strong emphasis on system reliability, performance, and observability. Based in Brisbane with full Australian work rights.

Experience

Software Engineer

Voiseed, Milan, Italy

Jan 2023 – Nov 2024

- Developed and maintained a cloud-based web application ensuring high performance and a seamless user experience, while integrating GraphQL to enable smooth communication between the frontend and backend services.
- Implemented JavaScript AWS Lambda functions using Amplify to interact with DynamoDB, enabling efficient data retrieval and storage. Integrated these functions with pre-deployed deep learning models on AWS, facilitating seamless inference calls.
- Managed deployments and CI/CD workflows using AWS Amplify, ensuring smooth and automated application updates.
- Utilized Grafana and Prometheus for system health monitoring, log management, and performance optimization.
- Maintained a Docusaurus-based documentation project, providing comprehensive technical documentation for the web application.
- **Technologies:** ReactJS, Redux, TypeScript, Material UI, AWS (Lambda, DynamoDB), GraphQL, Prometheus, Grafana.

Intern

Voiseed, Milan, Italy

Aug 2021 – Dec 2022

- Developed fast and scalable websites using Gatsby's static site generator, ensuring efficient data retrieval and rendering.
- Integrated Strapi as a flexible content management system, enabling dynamic content handling, role-based access control, and streamlined API management.
- **Technologies:** ReactJS, GraphQL, Git, Strapi, Gatsby, AWS EC2, Fargate, RDS.

Software Developer

Asteria Aerospace, Bangalore, India

2018 – 2019

- Contributed to building software for uploading data from drones to AWS, retrieving it for analysis, and processing aerial imagery such as orthophotos, DSM, and DTM tiles.

- Integrated Auth0 for user authentication, leveraging JSON Web Tokens for secure access.
- Worked with Go authorization libraries like Casbin to implement role-based access control (RBAC) and other access control models.
- Built and maintained APIs in Go, utilizing gRPC for communication and Protocol Buffers for data serialization.
- Automated the ingestion and grouping of AWS platform logs (CloudWatch) and application logs into a centralized logging service.
- **Technologies:** Golang, AWS, gRPC, Protocol Buffers, Docker, PostgreSQL, Git.

Projects

Unified Monitoring System

Master's Thesis, Politecnico di Milano

2022

- Developed a centralized monitoring system for Voiseed, an AI-driven text-to-speech startup, integrating scalable data processing pipelines with AWS Kinesis, Athena, and Glue to monitor and process critical system data, improving operational efficiency and early issue detection.
- Focused monitoring efforts on four key areas: customer activities, deep learning model performance, AWS services, and local computing resources.
- Implemented operational monitoring for deep learning models using TorchServe, enabling proactive issue detection and timely intervention.
- Optimized AWS service monitoring to ensure reliability, cost efficiency, and performance.
- Deployed infrastructure monitoring for backend components and managed GPU resource tracking to optimize resource allocation and maximize data center efficiency.
- **Technologies used:** AWS - Kinesis, S3, Athena, Glue, Prometheus, Grafana.

Evaluation of predisposing factors of Diabetes Mellitus using Machine Learning Techniques

Bachelor's Project, Amrita Vishwa Vidyapeetham

2018

- Collaborated closely with medical professionals to design and collect relevant data from patients diagnosed with Gestational Diabetes Mellitus (GDM).
- Developed a machine learning model using SVM and Naive Bayes to predict the risk of Diabetes Mellitus, leveraging patient data to identify key predisposing factors.
- Employed techniques like Grid Search, K-Fold Cross-Validation, and Leave-One-Out Cross-Validation (LOOCV) to enhance model performance, achieving an accuracy range of 60-70%.
- Published a paper detailing the methodical review of current practices and analyzing GDM data to identify predisposing factors from patient data, aiming to enhance machine learning models for improved prediction accuracy.
- **Technologies used:** Machine learning: SVM, Naive Bayes, scikit-learn library, Python.

Education

M.Sc. in Computer Science and Engineering, Politecnico di Milano, Italy

Key Coursework: Software Engineering, Business Information Systems, Unstructured and Streaming Data Engineering, Machine Learning, Natural Language Processing.

Technical Skills

Programming Languages: JavaScript, Golang, Python

Frontend Development: ReactJS, Redux, TypeScript, Next.js, GraphQL, Material UI, HTML, CSS, Gatsby, Docusaurus

Backend Development: Node.js (AWS Lambda), Gin-Gonic, gRPC, REST APIs, Strapi

Databases: DynamoDB, PostgreSQL, MySQL

Cloud & DevOps: AWS (Lambda, Amplify, API Gateway, EC2, S3, CloudWatch, Athena, Kinesis, Glue, Fargate), Docker

Monitoring & Logging: Grafana, Prometheus, CloudWatch

Frontend Tooling: Webpack, Babel, npm, yarn, ESLint, Prettier

Collaboration & Project Management: Git, Atlassian Suite (Jira, Confluence, Bitbucket, Trello), Miro, Figma, Agile Methodologies (Scrum/Kanban)

Community Service & Outreach

FOSS@Amrita

2014 – 2019

- Active member and mentor at FOSS@Amrita, the official FOSS club of Amrita School of Engineering, Kollam. Organized workshops and technical sessions, fostering a collaborative environment focused on code sharing and growth.

Advisor at #includefellowship of SHE++

2017

- Provided technical and moral support to high school students in completing tech projects as part of the Fellowship program by SHE++.

Django Girls

2017

- Coach at the Django Girls workshop hosted at LBS Institute of Technology for Women, Thiruvananthapuram, India. Led beginners through the process of learning Django and Python with the help of open-source tutorials.