

SANJAY SATHISH KUMAR

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SUMMARY

Cloud and Backend Engineer with around two years of experience in designing, developing, and supporting cloud-based backend services and applications. Skilled in AWS, Node.js, Python, and SQL to build robust backend functionality. Hands-on experience with API development, data processing, cloud deployments, and familiarity with CI/CD pipelines and Docker containerization. Committed to continuous learning and growth within collaborative engineering environments.

TECHNICAL SKILLS

Cloud Platforms: AWS (EC2, S3, RDS, Aurora PostgreSQL, Lambda, CloudWatch, IAM)

Programming & Backend: Python, Node.js, Express.js, REST APIs

Data Engineering & Analytics: SQL, Data Processing, Data Cleaning, Data Validation, Pandas, PySpark

DevOps & Automation: Docker, Jenkins (CI/CD), Terraform (IaC), Ansible, VMware

Databases: PostgreSQL, MySQL, SQL Server

Tools: Git, Gerrit, Jira, Postman, Swagger

Core Concepts: Cloud Computing, API Integration, Data Pipelines, Networking Basics, Object-Oriented Programming

EXPERIENCE

Software Engineer — Gigamon

Chennai, India *Apr 2022 – Jul 2023*

- Developed backend services and platform components for **GigaVUE Cloud Suite**, a cloud observability product for private and hybrid cloud environments.
- Deployed and maintained services on **VMware ESXi** virtual machines and **AWS EC2** test environments.
- Assisted with infrastructure provisioning using **Terraform and Ansible**, following IaC practices for consistent environment setup.
- Supported **Jenkins CI/CD pipelines** by validating builds and deployments, performing post-deployment API checks using **Postman** and internal automation frameworks.
- Collaborated with DevOps and backend engineers to troubleshoot deployment and runtime issues in **Docker-based containerized services** through log review.
- Assisted with analyzing logs and metrics to identify backend and infrastructure-related issues, supporting root-cause analysis and platform stability improvements.
- Worked in an Agile/Scrum environment, participating in sprint planning, daily stand-ups, and retrospectives using Jira.

Developer — Vehonitor

Chennai, India *Mar 2021 – Mar 2022*

- Contributed to the development of **ReliableDoctors**, a cloud-hosted telemedicine web application for managing patients, doctors, and online appointments.
- Assisted in building and maintaining frontend features using **Angular** and backend REST APIs using **Node.js** and **Express**.
- Worked with **AWS Aurora (PostgreSQL)** and **RDS** to store and manage patient records, doctor profiles, appointments, and payment data.
- Supported serverless features built using **AWS Lambda** and used **CloudWatch** to monitor logs and track issues related to appointment updates, notifications, and payment workflows.
- Used **AWS S3** to store documents and files uploaded by patients and doctors, such as reports and records.

- Implemented features that allowed patients to manage **family member profiles** and doctors to assign **assistants** for handling appointments.
- Integrated **Twilio** for real-time chat and **Razorpay** for secure online appointment payments.

PROJECTS

NASA Space Explorer (Cloud-Based Full-Stack Application)

- Designed and deployed a cloud-hosted backend service using Node.js and Express to fetch and process data from multiple public NASA APIs.
- Deployed backend services on cloud infrastructure, enabling scalable access to external APIs and reliable data retrieval.
- Implemented REST APIs with proper error handling and CORS configuration to support secure frontend-backend communication.
- Developed a React-based frontend that consumed cloud-hosted APIs and displayed real-time space data.
- Managed application deployment and updates in a cloud environment, ensuring availability and smooth user access.

Budget-Based Restaurant Finder (Cloud Data Processing Application)

- Built a cloud-based data processing application using Python and Flask to analyse and recommend restaurants from a dataset of 80,000+ records.
- Processed and cleaned large datasets using Pandas and PySpark, preparing data for efficient querying and recommendations.
- Deployed the application on AWS EC2 and stored datasets in AWS S3, enabling scalable storage and compute.
- Optimised backend filtering logic to improve query performance by 40% in a cloud-hosted environment.
- Designed RESTful endpoints to allow users to query recommendations based on budget, cuisine, and location.

Disease Prediction ML Models (Thesis)

- Built machine learning models to predict diabetes and heart disease with over 80% overall accuracy, giving reliable early-risk indications.
- Improved the model's ability to correctly identify at-risk patients by a large margin, increasing its detection quality by 66–73% after fixing data imbalance.
- Balanced the training data so the model could learn fairly from all cases, which made predictions much more consistent and dependable.
- Optimised ensemble models such as AdaBoost, Random Forest, and Gradient Boosting improved model accuracy by 15%.

EDUCATION

Dublin City University

M.Sc. in Computer Science (Data Analytics)

Dublin, Ireland

Aug 2023 – Sep 2024

R.M.D. Engineering College

B.E. in Computer Science

Chennai, India

Sep 2017 – Jun 2021

Certification

Udemy – Data Analyst Bootcamp

Coursera – HTML5/CSS3/JS

edX – SQL for Data Science