

Mukesh Kumar Krishnamoorthi

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SUMMARY

Software Engineer with 3 years of experience designing and developing scalable backend applications, RESTful APIs, and workflow automation platforms using Python, JavaScript, Node.js, PostgreSQL, and MongoDB.

Currently transitioning into Data Engineering through hands-on development of a production-inspired analytics platform implementing ETL pipelines, data transformation, incremental processing, SQL analytics, and layered data architecture. Strong foundation in backend engineering, database design, data processing, and building reliable, scalable software systems.

EDUCATION

PRIST University, Thanjavur

Master of Computer Applications (MCA)

2022

Periyar Maniammai Institute of Science & Technology, Thanjavur

Bachelor of Computer Applications (BCA)

2020

EXPERIENCE

Software Engineer

Mar 2025 – Feb 2026

Adyog Software Solutions Pvt. Ltd.

Chennai

- Developed and optimized 15+ RESTful APIs using Node.js, Express.js, and PostgreSQL to support secure and scalable backend services.
- Engineered a university-scale academic paper analysis platform for AI-generated content detection and academic reference validation.
- Designed and implemented Role-Based Access Control (RBAC) for conference management modules supporting authors, reviewers, and administrators.
- Built 30+ reusable React components, improving UI consistency and accelerating feature development.
- Designed a bulk email communication system supporting personalized notifications across multiple user roles.
- Refactored legacy modules into a modular architecture, improving maintainability and reducing code duplication.
- Collaborated with cross-functional teams in Agile environments to deliver production-ready software.

Software Developer

Feb 2023 – Feb 2025

AptonWorks Private Limited

Chennai

- Developed a scalable workflow automation platform supporting configurable business workflows and rule-based execution.
- Built reusable frontend components using React.js, Redux, and modern JavaScript.
- Integrated frontend and backend services through secure REST APIs.
- Implemented workflow validation mechanisms supporting complex automation scenarios.
- Improved application scalability through reusable architecture and optimized rendering strategies.
- Collaborated with product managers and engineering teams to deliver business-critical workflow automation features.

PROJECTS

TaskPulse Analytics Platform (Ongoing) | Technologies: Python • PostgreSQL • Pandas • SQL • Docker • Node.js

- Built a production-inspired analytics platform for processing operational task management data through a multi-stage ETL workflow.
- Designed a layered architecture consisting of Raw, Clean, and Analytics PostgreSQL databases to separate ingestion, transformation, and reporting workloads.
- Developed Python ETL pipelines to extract, clean, validate, transform, and load operational data into analytics-ready datasets.
- Implemented incremental data processing using updated_at timestamps and pipeline state tracking to process only newly created or modified records.
- Performed data cleaning and transformation using Pandas, including duplicate removal, missing value handling, status normalization, and validation.
- Developed advanced SQL analytics using JOINS, CTEs, GROUP BY, STRING_AGG, ROW_NUMBER(), RANK(), DENSE_RANK(), LEAD(), and LAG().
- Built analytical datasets for workspace productivity, project progress, user activity, and task completion metrics.
- Containerized databases and data processing services using Docker Compose for reproducible local development.
- Developed REST APIs to expose analytics data for reporting applications.
- Currently extending the platform with orchestration, cloud deployment, monitoring, and automated data quality validation.

TECHNICAL SKILLS

Python

JavaScript (ES6+)

SQL

ETL Pipelines

Data Processing

Data Cleaning

Data Transformation

Data Validation

Incremental Loading

Batch Processing

Data Modeling

Analytics Reporting

SQL Window Functions

Query Optimization

PostgreSQL

MongoDB

Node.js

Express.js

REST APIs

Authentication

Authorization

RBAC

Pandas

Docker

Docker Compose

Git

GitHub

Clean Architecture

Agile Development

LANGUAGES

Tamil — Native English — Professional