

Tusar Ranjan Mahapatra

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Full Stack Developer with 3.5 years' experience delivering scalable web applications and integrating ML models into production for healthcare and finance domains.

Experience

JULY 2022 – PRESENT

Software Engineer | Providence Global Center | Hyderabad

- Architected and delivered a **full-stack Finance Data Reporting, Financial Scenario Modelling and Budgeting platform** using Angular, .NET, and SQL Server, enabling organisation-wide tracking of headcounts, spends, budgets, and forecasts in real time. This is fully customizable and can generate financial review reports across teams with minimum configuration changes.
- Developed a **scenario modelling engine**, reducing efforts in financial planning cycles by **40%** through interactive data-driven simulations.
- Engineered and fine-tuned advanced SQL Server stored procedures and high-complexity queries, leveraging indexing, query plan optimization, and execution tuning to significantly enhance system performance and reduce large-scale report generation time.
- Designed and implemented a scalable, AI-ready Model Context Protocol (MCP) server-client framework in Python, enabling intelligent, low-latency integration between backend services and a Microsoft Teams chatbot, significantly enhancing maintainability, adaptability, and cross-team adoption.
- Built a hybrid CV+NLP end-to-end Python+React platform that automates stained blood smear analysis, generates CBC-style differentials and predicts probable conditions or diseases. Identified for patent filing; draft in preparation.

JANUARY 2022 – JUNE 2022

Software Engineer Intern | Providence Global Center | Hyderabad

- **Built an end-to-end incident analysis platform** using Python, NLP, and ML to automate classification, prioritization, and trend analysis of support tickets, reducing average resolution time from ~2-3 hours to ~35 minutes.
- **Developed and deployed KNN-based classification models** (84%+ accuracy) and topic modeling (LDA/LSI) pipelines for root cause analysis, incident categorization, and keyword clustering.
- **Created automated data pipelines and Power BI dashboards** for real-time visualization of incident trends and actionable insights, improving organisation-wide support operations across teams.

JANUARY 2021 – JANUARY 2022

Software Engineering and UX Design Intern | Highradius Technologies

- Designed and prototyped “Autonomous Accounting” — an AI/ML-powered UX case study for automating month-end journal reviews, including stakeholder research, user flows, personas, wireframes, and high-fidelity Figma prototypes validated via usability testing.
- Developed and deployed a full-stack B2B fintech cloud application using Java, React, SQL, and ML models for anomaly detection, error handling, and data reconciliation.
- Optimized performance of REST APIs and SQL queries, improving response times by 20% and report generation speed by 30%.

Education

Bachelor of Technology | Kalinga Institute of Industrial Technology, Bhubaneswar (2018 - 2022)

Computer Science and Engineering | 9.4 CGPA