Hitarth Bharad

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Software Engineer | Cloud & Full-Stack Development

Software Engineer with 3+ years of experience in full-stack development, distributed systems, and cloud-based solutions. Strong background in data structures, algorithms, Computer Science & analytical skills and scalable SaaS infrastructure. Passionate about building user-facing applications, optimizing system performance, and integrating AI-driven solutions.

Education

University of Arizona – Tucson, AZ, USA GPA: 3.9/4.0
M.S. in Information Science & Machine Learning Aug 2023 – May 2025
Courses: Neural Networks, Applied Natural Language Processing, Bayesian Modelling and Inference, Data Mining, Introduction to Machine Learning, Stats Natural Language Processing

Dhirubhai Ambani Institute of Information and Communication Technology – Gandhinagar, India
B.Tech. in Information and Communication Technology Aug 2017 – May 2021
Courses: Data Structures and Algorithms Topics in Deep Learning, Introduction to Graph Theory, Nanoelectronics, Software Engineering, Operating Systems.

Skills

- Programming Languages: C++, Python, Java, JavaScript, TypeScript
- Backend Development: Python (Django, DRF), Java (Springboot), Node.js (Express.js, Next.js)
- Frontend Development: React.js, Next.js, Remix.js, Tailwind CSS, Material UI
- Databases: SQL, NoSQL, PostgreSQL, MySQL, MongoDB,
- Cloud & DevOps: Microsoft Azure, Jenkins, Kubernetes, Vercel, API Integration (REST / RESTful, SOAP), Azure Blob Storage, AWS S3
- Performance Optimization: Multi-threading, memory-efficient algorithms, debugging & profiling, WebSockets.
- Machine Learning & Data Processing: Tensorflow, PyTorch, Sci-Kit Learn, pandas, numpy, huggingface, transformer.
- Leadership & Communication: Agile Methodologies with Scrum & Kanban, Team collaboration, project coordination, cross-functional stakeholder management and Efficient Communication.
- Others: Object Oriented Programming, SOLID principles, LINUX Operating System.

Experience

FERO.AI – Dubai, UAE Sept 2021 – July 2024
Software Engineer
- Working in an early-stage startup, designed and implemented highly scalable and available SaaS infrastructure, including cloud-based storage and API layers for Authentication, Payment Gateway and Financial Services, Channel Partnership, and Presales Modules, supporting over **50 enterprise clients** across **15+ countries**.
- **Led the system architecture and prototyping** (POC) of new projects to improve product development process and deliverables, ensuring faster go-to-market strategies and better scalability.
- Led the development of iPaaS – CrossDock product (Integration Platform as a Service), integrating 30+ third party systems, reducing the data transfer time to achieve **20% increase in operational efficiency**. Platform contributed to the reducing the development time to **nearly 60%.**
- Developed the multi-tenant SaaS solution for Logistics First mile, Mid mile and Last mile delivery planning, trip management, contract management and revenue management for B2B Logistics Customers in MENA, Europe, Asia region.
- **Developed the Integrated LLMs** (ChatGPT - OpenAI, Mistral) based **RAG** pipeline for knowledge management, smart reporting to reduce customer query resolution time by 60% and improving accuracy of responses by **30%.**
- Engineered robust backend services utilizing **Java (Spring Boot), Python (Django, DRF),** and **JavaScript frameworks (Express.js, Next.js)** for cloud-based applications that enhanced scalability and reduced latency by 30 milliseconds per request.
- Implemented the Agile project management (**Scrum, Kanban**) to streamline the project and improve delivery cycle.
- Utilized the DevOps tools – (**Azure, Kubernetes, Jenkins**) to optimize cloud deployments and ensure high availibility.
- Participated in **on-call rotations**, contributing to reliability monitoring, debugging, and security processes.

Verse Innovation – Bengaluru, India June 2021 – Aug 2021
Associate Software Engineer
- Developed **backend infrastructure** for a high-traffic video streaming platform serving **10M+ daily active users**, ensuring system stability and scalability.
- Optimized API architecture using Java (Spring Boot), reducing API response times by **40%** and increasing throughput by **25%.**
- Implemented customized data feed services, leveraging AI-driven content recommendation, increasing user engagement by 20% and retention rate by **15%**.

Projects

Finance Tracking & Growth Prediction Application
- **Technologies**: Next.js, Tailwind CSS, MongoDB, TensorFlow, Vercel
- Developed a personal finance tracking app to manage active and passive income, expenses, and investments.
- Designed a Neural Network-based deep learning model to predict portfolio growth based on historical financial data. Built the frontend using **Next.js** and **Tailwind CSS**, ensuring a responsive and intuitive user interface.
- Integrated MongoDB for dynamic data storage and used Vercel for deployment and serverless hosting.

Tucson Crime Pattern Analysis Dashboard
- **Technologies:** R (Shiny App, Quarto), PostgreSQL, Leaflet.js, Time-Series Analysis.
- Built an **interactive crime analytics dashboard** using **R (Shiny, Quarto)** for real-time data visualization.
- Fetched and processed crime data from the **Local Police Department API** to provide **trend analysis and geospatial mapping**.
- Integrated **Leaflet** for interactive maps, allowing users to filter crime hotspots by time, type, and location. Developed **time-series & Geospatial models** for crime pattern analysis, helping authorities allocate resources efficiently.

Anomaly Detection in real time series data
- Technologies: Python, Matplotlib, Numpy, Pandas
- implemented an anomaly detection system that simulates a data stream and identifies anomalies using an Exponential Moving Average (EMA) approach. The system generates data points that incorporate trends, seasonality, and random noise, and it visualizes the data along with detected anomalies in real-time.

Research Publication

- Published a research paper on “Performative analysis on Ion sensitive field effect transistor by varying intrinsic parameter” - Research Paper Link