Hitarth Bharad

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Website

Summary

Software Engineer with 3+ years building AI-native SaaS platforms and legal document processing systems. Expertise in distributed architectures, LLM integration and automated workflow orchestration with a proven track record of delivering secure, compliant solutions for sensitive data environments. Passionate about leveraging AI to solve complex domain-specific problems in legal technology.

Education

University of Arizona **Aug 2023 - May 2025**
MS Information Science - Machine Learning *Tucson, Arizona*

Dhirubhai Ambani Institute of Information and Communication Technology **Aug 2017 - May 2021**
Bachelors Engineering Information and Communication Technology *India*

Work Experience

FERO.AI **Sep 2021 – Jul 2024**
Software Engineer *Dubai, UAE*

- Architected distributed cloud-native systems for a multi-tenant SaaS logistics platform, designing microservices with **Java** and **Python - FastAPI** deployed using Kubernetes and Azure, implementing comprehensive observability with Prometheus, Grafana, and distributed tracing to power critical modules of Authentication, Payments, Freight Planning and Revenue Tracking
- Built real-time integration pipelines with **Rest & SOAP** frameworks connecting 30+ third-party systems of different Telematics, ERP, CRM using Kafka, Redis queues, and async jobs, reducing ETL latency by 35%, improving data integrity, and enabling seamless cross-platform data exchange with improved customer experience and 99% reliability
- Developed and optimized frontend features using **Next.js, React and TypeScript** integrating seamlessly with backend APIs, implementing caching and efficient query logic, comprehensive Jest & Cypress testing suites and improving system performance and user experience
- Mentored a team of 5 engineers through code reviews, architecture discussions and AI/ML best practices, led prototyping and project lifecycle, system architecture reviews for new projects, and collaborated across functions to accelerate product delivery, ensure scalability, and improve engineering best practices
- Maintained production systems with on-call responsibilities, resolving critical incidents within 15-minute SLA, implementing automated monitoring and debugging workflows that reduced system downtime by 40%

Verse Innovation **Jun 2021 – Aug 2021**
Associate Software Engineer *Bangalore, India*

- Optimized backend API architecture using **Java (Spring Boot)**, adding indexing and load balancing to handle concurrent requests, which reduced response times by **40%** and increased throughput by **25%** for a high-traffic video streaming platform serving **10M+ daily active users**.
- Implemented user management and personalized data feed services by integrating **AI-driven content recommendation models**, improving user engagement by **20%** and boosting retention rate by **15%** across millions of daily sessions.

Fineprint.legal **Jan 2021 – May 2021**
Software Engineer Intern *Remote, India*

- Built document automation and processing tools for legal workflows including contract drafting, data analysis and document parsing using **React**, **Django**, and **PostgreSQL**, handling sensitive legal data with SOC 2 compliance standards
- Implemented intelligent document parsing algorithms to extract and analyze key legal data points from various document types, achieving **92% accuracy** through comprehensive unit testing and integration testing frameworks
- Developed automated contract generation systems that streamlined legal document creation for law firms, reducing contract review time by **60%** and enabling same-day turnaround for standard agreements
- Created data analysis pipelines for legal document processing with real-time monitoring and alerting, enabling automated insights and workflow optimization while maintaining **99.5% uptime**
- Collaborated as an early engineer to architect scalable legal tech solutions from ground up, establishing code review processes and **CI/CD practices** for production deployments

Projects

Aegion **aegion.app**

FastAPI, NextJS, WebSockets, PineCone, Embeddings, GPT-4, PostgreSQL, AWS

- Built Aegion, a real-time agent orchestration platform with FastAPI, Next.js, WebSockets, PostgreSQL and vector search with PineCone, enabling natural language-driven automation of multi-step workflows.
- Implemented Inference, Decision-Making, and Execution Engines to dynamically plan, route, and execute tasks across integrated tools, reducing setup time and simplifying adoption for non-technical users.

Auto PO Processor **auto-po.app**

Next.js, TypeScript, FastAPI Python, ShadCN UI (Tailwind), Tesseract OCR, PyTest

- Built an intelligent document processing platform using OCR and NLP to extract structured data from complex PDFs with PII data encryption and secure processing pipelines. Integrated text parsing algorithms with 95% accuracy for multi-format document types through comprehensive testing with PyTest and automated quality assurance workflows
- Created fuzzy matching algorithms for entity recognition and data validation with real-time performance monitoring. Built automated review workflows with human-in-the-loop validation for quality assurance, reducing manual data entry time by 75% and processing 1000+ documents per hour
- Implemented production monitoring with error tracking and performance metrics, ensuring 99% uptime and sub-second response times for document processing workflows

Tucson Crime Pattern Analysis Dashboard **Dashboard**

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.
- 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.

Technical Skills

Languages: Python, Java, C++, Rust, HTML/CSS, JavaScript, TypeScript, SQL
Performance Optimization: Multi-threading, memory-efficient algorithms, Profiling, Distributed tracing
Technologies/Frameworks: Linux, Express.js, Next.js, FastAPI, React, Spring boot, Tailwind, WebSockets
Database: PostgreSQL, MySQL, MongoDB, Redis, PineCone
Cloud: AWS, Azure, Jenkins, Kubernetes
Machine Learning: Scikit-learn, TensorFlow, PyTorch, Hugging Face, Transformer, XGBoost, Diffusion Model
Testing & Quality: PyTest, Jest, Cypress, Unit Testing, Integration Testing, CI/CD
Security & Compliance: SOC 2, PII handling, Data encryption, Secure API development