

HIBA IQBAL BEGUM

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SUMMARY

Software Engineer with 5+ years of experience building scalable backend systems, APIs, and cloud-native applications in health-care and enterprise environments. Experienced in designing distributed workflows, event-driven services, and production-grade integrations using C#, Python, REST APIs, AWS, Azure, Docker, and Kubernetes. Built AI-powered applications integrating Claude API, structured prompt workflows, and contextual recommendation systems for real-world user experiences. Strong background in system reliability, backend architecture, asynchronous processing, and full-stack application delivery.

SKILLS

Languages: Python, C#, SQL, JavaScript, TypeScript, Swift

AI & LLM: LLM APIs, Prompt Engineering, RAG Concepts, AI Workflows, Claude API, OpenAI API, Semantic Search, Embeddings

Frameworks & APIs: FastAPI, ASP.NET Core, Node.js, REST APIs, GraphQL, Microservices

AI Frameworks: LangChain, LlamaIndex

Cloud & DevOps: AWS, Azure, Docker, Kubernetes, CI/CD, GitHub Actions, Jenkins

Messaging & Distributed Systems: RabbitMQ, Kafka, Event-Driven Architecture

Databases: PostgreSQL, MS SQL Server, MySQL, Firestore, ChromaDB

Frontend: React.js, SwiftUI, HTML5, CSS

Testing & Security: OAuth2, JWT, xUnit, NUnit, API Validation

Tools & Concepts: Git, Agile, System Design, AI-Assisted Development, Production Monitoring

EXPERIENCE

Berkley Medical Management Solutions (BMMS)

Jul 2023 – Present

Software Development Engineer

New Jersey, USA

- Redesigned a medical negotiations platform handling high-volume billing workflows by rebuilding backend services, API integrations, and business-rule orchestration, reducing manual operational escalations by 35%.
- Led an enterprise MBR vendor migration affecting live healthcare transaction pipelines, coordinating validation, regression testing, and production rollout with zero customer-facing downtime.
- Built a centralized operational dashboard using REST APIs and real-time workflow tracking, reducing issue investigation time from hours to minutes for support and operations teams.
- Developed asynchronous processing workflows using RabbitMQ to improve retry handling, service decoupling, and transaction reliability across distributed systems.
- Optimized backend APIs and SQL queries supporting large healthcare datasets, improving response consistency and reducing processing latency by 28%.
- Managed production incidents, hotfix deployments, and SLA-critical issues across customer-facing applications, maintaining platform stability for daily billing operations.
- Led technical onboarding and code reviews for 6 offshore developers, improving release consistency and reducing recurring implementation defects across sprint cycles.

Aurigo Software Technologies

Jun 2019 – Aug 2021

Software Engineer II

Bangalore, India

- Developed ASP.NET-based enterprise applications supporting government infrastructure and transportation programs across bid management and procurement workflows.
- Designed and optimized SQL database schemas and stored procedures handling large transactional datasets, improving reporting and query execution performance by 30%.
- Built and integrated REST APIs enabling secure data exchange between procurement systems, reducing manual reconciliation effort for operational teams.
- Containerized backend services using Docker to standardize deployment workflows and improve environment consistency across development and QA systems.
- Collaborated with cross-functional product and engineering teams in Agile delivery cycles, contributing to feature releases, defect resolution, and production support.

Aurigo Software Technologies

Jan 2019 – May 2019

Software Developer Intern

Bangalore, India

- Built workflow automation features for a capital project execution platform used by public-sector infrastructure teams.
- Assisted in developing contractor bidding modules and backend validation logic for project management workflows.
- Contributed to testing, debugging, and version control processes within Agile development environments.

PROJECTS

HivRa — AI-Powered Health & Nutrition Platform -Link

SwiftUI | Python | FastAPI | Firebase | Claude API | Firestore

- Built and launched a full-stack AI-powered nutrition platform integrating Claude API for contextual meal recommendations, personalized planning, and structured health workflows.
- Developed backend AI orchestration services using FastAPI and modular prompt pipelines to generate dynamic meal plans based on user preferences and nutritional goals.
- Designed scalable data models separating recipe, grocery, and snack domains, improving maintainability and reducing cross-feature dependency complexity.
- Implemented Firebase Authentication, Firestore storage, and API-driven workflow handling to support secure multi-user interactions and real-time data synchronization.
- Applied AI-assisted development workflows and structured debugging processes to accelerate feature iteration, testing, and deployment cycles.

AI PR Review Agent — GitHub Action for Automated Code Review

Python | Claude API | Groq API | GitHub Actions | GitHub REST API

- Built a domain-agnostic GitHub Action that reviews pull requests using a multi-pass LLM design — separate focused passes for bugs, security, style, and test coverage — instead of a single-shot review prompt.
- Implemented diff chunking to preserve review quality on large pull requests that exceed model context limits, and built an evaluation harness against fixture PRs with known injected issues to measure review accuracy.
- Generated structured output from each review pass and posted it as a formatted, actionable comment directly back to the pull request via the GitHub REST API.

LLM Gateway / Router — Production AI Infrastructure

Python | FastAPI | Claude API

- Built a FastAPI proxy in front of the Claude API to centralize request routing, logging, and usage tracking across multiple AI-powered applications.
- Implemented a per-user token bucket for rate limiting and quota enforcement, validating the logic against mock multi-user request data to prevent any single user or workflow from exhausting the shared API budget.
- Designed multi-provider fallback logic so requests automatically reroute to a secondary model provider on failure, improving reliability for downstream AI applications.

Stack-Trace / Error Explainer CLI

Python | Typer | Claude API

- Built a pip-installable command-line tool that takes a pasted stack trace or error message and returns a root-cause explanation and suggested fix via the Claude API, working across any language’s traceback format.
- Designed a zero-configuration, paste-and-go workflow for fast daily-use debugging without requiring project setup.

AI Knowledge Assistant — RAG-Based Document Search System

Python | FastAPI | LangChain | ChromaDB | OpenAI Embeddings

- Developed a retrieval-augmented generation system enabling semantic document search and contextual Q&A across uploaded PDFs and structured enterprise content.
- Built ingestion pipelines for chunking, embedding, and vector indexing using LangChain and ChromaDB to improve retrieval relevance and response accuracy.
- Exposed AI workflows through FastAPI endpoints with structured response validation and conversational context handling.
- Optimized retrieval configuration and prompt structure to reduce irrelevant responses and improve answer grounding quality during testing.

EDUCATION

New Jersey Institute of Technology

Master of Computer Science

2023

Newark, NJ

Sri Jayachamarajendra College of Engineering

Bachelor of Computer Science

2019

Mysore, India

AWARDS & RECOGNITION

- Colleague of the Year – Berkley Medical Management Solutions (October 2024) — recognized by CEO Eric Smith for outstanding contributions and excellence.
- Best Paper Award – RCAAI 2025 (Healthcare Systems Track 2) — multi-institution international conference.
- Spot Award for Commitment & Ownership – Project IOWA DOT, Aurigo Software Technologies.
- 2nd Place – Innovation Idea Submission, GSSS National Level Competition.