

HARSHITA BATTA

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Software Engineer | Python & Django Developer | Backend Engineering | APIs | Cloud & Platform Engineering

PROFESSIONAL SUMMARY

Software Engineer Intern with hands-on experience contributing to scalable backend systems and production engineering workflows in fast-paced product environments. Experienced in developing backend services using Python and Django, building REST APIs, debugging production issues, and supporting reliability improvements for enterprise applications. Strong foundation in designing systems, databases, CI/CD practices, observability, and secure data handling. Proven ability to collaborate across Product, QA, DevOps, and engineering teams to deliver maintainable, production-ready software solutions.

WORK EXPERIENCE

Software Engineering Intern

January 2026 – Present

Jio Haptik Technologies Limited

Mumbai, India

- Developing and optimizing backend services using Python and Django for scalable enterprise-grade applications supporting production workflows and customer-facing features.
- Enhancing REST API development, backend integrations, and feature deployments across high-velocity product engineering cycles.
- Working with MySQL for backend data management, query optimization, schema handling, and application-level performance improvements.
- Supporting production debugging, root cause analysis, and issue resolution to improve platform reliability, operational stability, and release quality.
- Collaborating closely with Product, QA, DevOps, and Client Engineering teams to deliver production-ready features and accelerate engineering execution.
- Assisting in implementing CI/CD workflows, deployment automation practices, and secure coding standards within agile engineering environments.
- Contributing to reusable and maintainable backend components through peer reviews, engineering discussions, documentation, and clean coding practices.
- Working with distributed systems tools including Redis, Docker, and Elasticsearch across backend service workflows.
- Supporting observability and monitoring initiatives for backend systems processing sensitive and personally identifiable information (PII).
- Participating in backend architecture and scalability discussions involving performance optimization, service reliability, and maintainability improvements.
- Operating within fast-paced agile development cycles with strong ownership, cross-functional collaboration, and production-focused execution.

PROJECTS

Fault-Tolerant Distributed 3D Printer Orchestration System | Python, Firebase, REST APIs

- Engineered a distributed 3D printer management platform implementing the Raft consensus algorithm for fault-tolerant coordination across nodes.
- Designed backend services to manage printers, filament inventory, and print job orchestration using REST APIs.
- Implemented leader election, replicated log handling, and consistency validation mechanisms to improve distributed system reliability.
- Integrated Firebase persistence to maintain a synchronized state and improve fault recovery, along with backend fault tolerance.

LLM-based Interview Intelligence Platform | Python, NLP, RAG, LoRA, HTML, CSS

- Built an AI-driven mock interview platform with personalized question generation and real-time response analysis.
- Implemented NLP preprocessing pipelines, Retrieval-Augmented Generation (RAG), and LoRA-based optimization techniques.
- Achieved 93% retrieval accuracy and 91.8% voice input accuracy during testing.
- Improved response evaluation quality through semantic analysis and contextual ranking mechanisms.

Real-Time Gesture-Controlled Assistive Robotics Simulation | Python, MediaPipe, PyBullet

- Developed a gesture-controlled robotic arm simulation for assistive cooking operations, including stirring, pouring, and flipping.
- Integrated MediaPipe-based real-time hand tracking with inverse kinematics for robotic motion control.
- Simulated realistic robotic interactions using PyBullet physics environments.
- Improved gesture recognition responsiveness and interaction accuracy for real-time control flows.

Gamified Financial Literacy Platform | MERN Stack, Python, SQL

- Built a gamified fintech platform during Hack4Soc 2.0 to promote financial literacy among young users.
- Developed quiz engines, gamification workflows, and interactive learning modules.
- Contributed to frontend design, backend integration, and application responsiveness under rapid development timelines.
- Worked across MERN stack components and SQL-backed data workflows.

TECHNICAL SKILLS

Languages: Python, C++, C, Java, SQL, JavaScript

Backend & Frameworks: Django, REST APIs, Node.js, Express.js

Frontend: HTML, CSS, JavaScript, React.js

Cloud: AWS, GCP

Databases: MySQL, MongoDB, Firebase, Amazon RDS

DevOps: Docker, CI/CD, Linux, Shell Scripting, Jenkins

Distributed Systems & Tools: Redis, Elasticsearch

Developer Tools: Git, GitHub, Postman, RESTful Services, Claude Code

Engineering Practices: Agile Development, Secure Coding, Peer Reviews, Debugging, Observability, Production Support, Documentation

EDUCATION

PES University

Bangalore, India

- Major: Bachelor of Technology – Computer Science and Engineering
 - CGPA - 8.0/10

September 2022 - May 2026

ADDITIONAL INFORMATION

- Strong interest in backend engineering, distributed systems, scalable application architecture, and platform engineering.
- Comfortable working in production-focused engineering environments with rapid release cycles and ownership-driven execution.
- Experienced in cross-functional collaboration across engineering, product, QA, and DevOps teams.
- Familiar with secure data handling practices for systems involving sensitive and personally identifiable information (PII).
- Built and deployed projects involving AI/ML systems, distributed coordination, computer vision, and backend platform development.