

# HARSHIT GUPTA

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## EDUCATION

**Masters of Science in Computer Science** | Indiana University, Bloomington, United States **GPA 3.68** | **Aug 2023 – May 2025**  
Relevant Courses: Software Engineering, Applied Algorithms, Computer Networks, Cloud Computing  
**Bachelor of Engineering in Computer Engineering** | University of Mumbai, India **GPA 8.62** | **Aug 2016 – Oct 2020**  
Relevant Courses: Data Structures, Operating Systems, Distributed Systems, Machine Learning, Artificial Intelligence

## PROFESSIONAL EXPERIENCES

**Software Engineer (Data) Intern** **May 2024 – Present**  
*Bloom Insurance Agency* | **Bitbucket, SSIS, SSMS, Python, SQL** *Bloomington, IN*

- Integrated SSMS and NLP Techniques for developing applications to enhance policy data analysis capability by ~10%.
- Implemented ETL pipeline to process over ~500 GB data to extract insights on insurance policies using Python & SSIS.
- Debugged code for Broker product implementing unit and integration testing to automate and enhance operational resilience.

**Software Developer** **Jan 2024 – Present**  
*Indiana University Bloomington* | **React, JavaScript, Java, Spring Boot** *Bloomington, IN*

- Developed scalable system APIs for Student Technology Centers, resulting in a 40% increase in web application uptime and functionality for over 45,000 users monthly using Java and Spring Boot.
- Enhanced campus-wide operational efficiency by managing microservices and automation solutions designing applications using React, JavaScript, and ServiceNow, resulting in a 40% reduction in response times.

**Full Stack Developer** **Dec 2022 – Jul 2023**  
*Mahindra & Mahindra Financial Services* | **Java, Docker, AWS, Airflow, LLMs, Jenkins** *Pune, India*

- Engineered application for a customer management application serving 5000+ executives, utilizing Spring Boot to monitor status resulting to a 25% reduction in lead response time.
- Programmed a customer risk assessment scorecard model to help credit underwriters for loan products, reducing approval delay time by ~65%, and ensuring data privacy and compliance with RBI and ISO/IEC 27001.
- Implemented ETL pipeline with Airflow for automated report integrating APIs to reduce response time to ~10 minutes.
- Scripted end-to-end lifecycle for POC chatbot integrating LLMs using GPT-3.5-turbo APIs to provide answers about company policies, deployed the solution using AWS Lambda and API Gateway for managing low-latency API requests.
- Containerized applications using Docker and automated deployments with Jenkins (CI/CD), reducing downtime by 30-35%.

**Software Engineer** **Mar 2021 – Dec 2022**  
*Piramal Capital & Housing Finance* | **ELK, SonarQube, Kafka, JIRA, Python, Git** *Mumbai, India*

- Constructed an anomaly detection system with an accuracy of ~70% following SDLC methodologies with Python and Kafka to monitor API performance, calculating error thresholds and generating email alerts for faulty APIs.
- Reviewed code processes, utilizing SonarQube to rectify code smells, and vulnerabilities integrating with Jenkins for automated deployment reducing post-release defects by 20% writing unit and integration tests.
- Led a team of 4 interns ensuring seamless collaboration via JIRA while focusing on scrum and task management.
- Streamlined API management and monitoring by leveraging the Elasticsearch and Logstash reducing API downtime to ~10 minutes and improving overall system reliability.

**Software Developer** **Jul 2020 – Mar 2021**  
*Cogno AI* | **Python, Django, Java, Spring Boot, React, Rasa** *Mumbai, India*

- Enhanced customer engagement by 20% with 5+ chatbots using Rasa reducing the business response time by 20%.
- Administered clients' requirements to prepare flows and technical documentation using Agile for application developments.

## PROJECTS

**Zero-Shot Healthcare Medical Data Extraction with LLMs** | **LangChain, LCEL, OpenAI, Prompt Engineering**  
Created a zero-shot medical data extraction system from doctor-patient conversations using LangChain, Pydantic parser, and GPT-3 to deliver structured data on patient details, symptoms, & meds, along with summaries, by prompt engineering.

**Doodle Recognition Using Ensemble Technique** | **GCP, Deep Learning, TensorFlow**  
Designed deep learning system, processing 30,000+ sketches for training and hyperparameter optimization to compare models, achieving 7% higher accuracy with CNN for static sketches, LSTM excelled in handling sequential patterns

**Veteran Housing Solutions Platform** | **REST APIs, Java, Spring Boot**  
Engineered a Spring Boot platform to reimagine the G.I. Bill, providing housing solutions for active-duty service members. Integrated Rest APIs with authentication (MFA) and token-based authentication to maintain the exclusivity of the platform.

## PUBLICATION & AWARDS

- AWS Fundamentals Specialization Coursera | Microsoft Azure Administrator Course AZ-104T00.
- First Author: Doodle recognition using ensemble learning, <https://link.springer.com/book/10.1007/978-981-16-3690-5>

## AWARDS

- Runner-Up, Harvard University 'HackAHouse' 2024 for co-developing housing solutions for active-duty service members.
- Winner 'Smart India Hackathon 2019' for designing predictive applications at a Hackathon in Nagpur, India.
- TSEC Hall of Fame winner 2020' | Member of Machine Learning for All Club at Indiana University 2024-25.

## TECHNICAL SKILLS

- Programming Languages and Technologies:** GIT, Java, JavaScript, Python, React, Linux, C#.
- Architectural Skills:** Database Design, Generative AI, Microservices, System Design, Data Science.
- Data:** Airflow, Elasticsearch, Graph QL, MongoDB, MySQL, NoSQL, PostgreSQL, Snowflake, Oracle.
- Tools:** AWS, Apigee, Azure, Bitbucket, Docker, Fast API, Django, Jenkins, JIRA, Kafka, Kubernetes, Postman, Spring Boot.