

SANJEEVAN ADHIKARI

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Introduction

Software Engineer specializing in backend development with 4 years of experience designing and implementing software solutions. Currently pursuing MS in Computer Engineering at New York University.

Skills

- **Programming Languages:** Python, C++, Java, JavaScript, SQL
- **Frameworks and Libraries:** Node.js, Spring Boot, Hibernate
- **Databases:** MySQL, PostgreSQL, MongoDB
- **Tools and Platforms:** AWS, Docker, Kubernetes, Kafka, Git, Grafana

Education

New York University

Sep 2024 - Jun 2026

Master of Science, Computer Engineering

- **Coursework:** Real Time Embedded Systems, Machine Learning, Data Structures and Algorithm, ML Ops, Internet Architecture and Protocols

Assam Science and Technology University

Aug 2016 - Aug 2020

Bachelor of Technology, Computer Science & Engineering

- **Coursework:** Operating Systems, Database Management System, DSA, Distributed Systems, Object Oriented Programming, Computer Networks, NLP, Compiler Design

Professional Experience

zenda Technologies Solutions India Pvt. Ltd.

Sep 2022 - Aug 2024

Software Engineer (Backend) - Payment Team

Bengaluru, KA, India

Technical Stack: Hibernate, MySQL, Kafka, Java 8, Spring, Maven, Git, Grafana

- Onboarded and integrated payment gateways (Razorpay, Moneyhash, Camspay), improving transaction processing efficiency and expanding payment options for users
- Built webhook listeners for payment gateway updates, ensuring real-time transaction notifications and enhancing system reliability
- Helped design and developed Autopay, a key revenue-generating module, collaborating with a team of multiple engineers, product managers and solution architects to integrate seamless payment automation.
- Constructed APIs for Autopay flow and admin panel customization, enhancing user interface flexibility and improving administrative efficiency

iMerit Technology Services Pvt. Ltd.

Nov 2021 - Sep 2022

Software Engineer Full Stack - Technology Team

Kolkata, WB, India

Technical Stack: JavaScript, Python, MySQL, MongoDB, Postgresql, Angular.js, Node.js, Kafka, Kubernetes, Docker, Git, Github Actions.

- Built scalable frontend components for an image annotation platform, improving usability and accuracy for data labeling.
- Enhanced APIs for storing annotated images in various formats, resulting in improved data retrieval speeds

Tata Consultancy Services

Nov 2020 - Nov 2021

Assistant System Engineer Trainee - Cloud Services Team

Kolkata, WB, India

Technical Stack: Java, Python, Groovy

- Completed multiple courses and technical training programs, enhancing skills in Java, Python, and Groovy.
- Monitored and reported issues related to deployed services, leading to improved system reliability and faster issue resolution.

Projects and Achievements

Peer to Peer Messaging Application

Apr 2025

- Developed an end-to-end P2P messaging application entirely in Java, enabling direct peer connections over the Internet.
- Implemented UDP hole punching techniques to successfully establish connectivity between nodes behind NAT devices.
- Created a Java-based intermediary discovery server for node registration and peer address lookup, facilitating the P2P connection setup.
- Built both the backend logic and user interface components in Java to handle connection management and real-time message exchange.

Cloud-Native Legal AI Assistant with Full MLOps Lifecycle

Apr 2025

- Contributed to the end-to-end development and deployment of an NLP-based legal AI assistant on Chameleon Cloud infrastructure, managed entirely via Infrastructure-as-Code.
- Implemented a Retrieval-Augmented Generation (RAG) system processing thousands of legal documents using PyMuPDF, LLMs, Legal-BERT embeddings, and FAISS vector search.
- Developed and optimized the model serving component using FastAPI

- Integrated Prometheus/Grafana for observability, automated offline/online testing procedures, and established a feedback loop for continuous improvement and retraining.
- Key Technologies: Python, FastAPI, Prometheus, Grafana, Legal-BERT, FAISS, LLMs, Docker, Chameleon Cloud.

Pickle - AI Lifestyle Mobile App (HackNYU 2025 Winner)

Feb 2025

- Awarded best use of GenAI at HackNYU 2025 for "Pickle," a mobile app co-developed to combat daily decision stress using AI.
- Engineered the application using Flutter/Dart for the cross-platform UI and Flask/Python for the backend.
- Leveraged diverse Generative AI APIs to power features like personalized movie/food suggestions, travel ideas, and task prioritization.
- Implemented the MVP end-to-end in 36 hours, including troubleshooting third-party API issues (timeouts, suboptimal model outputs) and selecting appropriate AI tools for specific tasks.

Embedded Gesture-Based Unlocking System (STM32)

Sep 2024

- Developed an embedded system for gesture-based device locking/unlocking using an STM32F429I-DISCO development board.
- Wrote firmware entirely in C to process real-time data from the integrated I3G4250D 3-axis gyroscope.
- Implemented gesture recognition algorithms to identify specific user movements for secure authentication.

JavaScript P2P Network with DAT Protocol (LAN)

Aug 2020

- Developed a peer-to-peer (P2P) network system entirely in JavaScript enabling nodes on a Local Area Network (LAN) to directly communicate and transfer files.
- Utilized the DAT protocol for decentralized data storage and synchronization between peers.
- Implemented local peer discovery using UDP multicast (mDNS) allowing nodes to connect without a central server.
- Tech Stack: JavaScript (Node.js for server-side code and Vue.js for user interface), DAT Protocol.

Blogging Platform with CMS (GIMT Hackathon 2019 - Runner-up)

May 2019

- Developed a functional blogging website prototype using Hugo, HTML, CSS, and JavaScript within a 6-hour hackathon timeframe.
- Implemented core features for text and image content management, securing a runner-up position.