

Satya Raj Awasthi

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EDUCATION

Pokhara University (NCIT, Lalitpur)

May 2021 – Dec 2025

Bachelor of Engineering in Software Engineering

Relevant Coursework:

- **Programming and Theory:** Principles of Programming Languages, Data Structures and Algorithms, Analysis and Design of Algorithms, Mathematical Foundations of Computer Science (Logic, Automata)
- **Software Engineering:** Software Testing, Verification, Validation and Quality, Applied Operating Systems, Database Management Systems, Web Technology
- **Machine Learning and Applied Mathematics:** Artificial Intelligence and Neural Networks, Probability and Queuing Theory, Numerical Methods, Engineering Mathematics

ACADEMIC & PERSONAL PROJECTS

Log-based Fault Localization and Anomaly Detection System

Python, Pandas

Developed an autonomous fault localization system inspired by *DeepLog* and *Log-Based Fault Localization with Unsupervised Log Segmentation*. The system performs log parsing, anomaly detection, and root cause localization through deep learning and sequence modeling.

Caching and Load Balancing System

Go, Redis-like Architecture

Designed a distributed caching system with LRU eviction, append-only persistence, and a custom load balancing algorithm to study how caching systems are implemented.

Centralized Logging System using Kafka and ELK Stack

Java, Kafka, ELK Stack

Created a system that generates trace IDs per request and uses them across all microservices, integrated into an ELK pipeline for distributed tracing and log visualization.

NCIT Events Management Platform

FastAPI, MySQL, React, Tailwind, Docker

Built a full-stack web application for managing institutional events, registrations, and competitions; currently adopted by NCIT students and faculty.

INDUSTRY EXPERIENCE

eSewa Ltd., Lalitpur — Software Engineer

Mar 2023 – Present

Contributing to large-scale backend systems for Nepal's leading digital payment platform (serving 11M+ users). Responsibilities include designing scalable APIs, improving transactional reliability, and implementing secure communication workflows using Java, Spring Boot, Python, Kafka, and distributed technologies. Applied Test-Driven Development (TDD), Functional, and

Reactive Programming across hybrid on-prem and cloud-based services. Worked on developing multi-tenant and microservice architectures.

HONORS AND AWARDS

- **Undergraduate Full Scholarship** — Awarded by Pokhara University through national-level competitive examination for B.E. in Software Engineering (2021–Present).
- **GitHub Campus Expert** — Selected among 70 out of tens of thousands of global applicants by GitHub Education for technical excellence and community leadership.

MENTORSHIP AND LEADERSHIP

GitHub Campus Expert — Mentored and supported by GitHub Education to lead and grow the student developer community in Nepal. Delivered 10+ workshops and mentored 8+ hackathons on programming, open source, and career development.

Nepal Open Source Klub (NOSK) — Working Committee Member; organized 20+ FOSS events, including *Software Freedom Day 2022–2025*, engaging over 1000 participants.

Nepal Tek Community — Founding Member; led a 10+ member core team organizing 10+ events and building 6 sub-communities focused on various tech domains.

Selected Talks and Mentorships:

- Speaker at Hack36 8.0 (MNNIT India), GNOME Asia Summit 2023, and GitHub Field Day 2023–2024
- Mentor at NOSK Hackfest, MBM Ideafest, and other student-led hackathons

TECHNICAL SKILLS

Languages & Frameworks

Java, Spring, Python, FastAPI,
Go, JavaScript, React

DevOps Tools

Git, Linux, Docker, AWS,
Jenkins, Maven, Gradle

Data & Pipelines

MySQL, PostgreSQL, MongoDB,
Neo4j, Kafka, Redis, ELK, Minio

Development Practices

Microservices, TDD, Reactive
Programming, Functional Programming

SOFT SKILLS

Leadership and Collaboration, Communication, Adaptability, Problem Solving, Continuous Learning

More projects and details available at github.com/SatyaRajAwasth1