

Santosh Luitel

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Profile

Tech-savvy software engineer with expertise in backend and frontend development, microservices, network security, and AI. Strong problem-solving skills with experience in system administration, software development, customer support, and AI. Adept at working independently and in teams under pressure. Graduate student pursuing an M.S. in Computer Science at the University of South Dakota.

Experience

Software Engineer – F1Soft International Pvt. Ltd. Oct 2024 – Dec 2024

- Developed and maintained backend and frontend components for mobile banking products.
- Worked with AngularJS, Java, Spring Boot, and a microservices architecture.
- Integrated security measures using Spring Security and optimized performance.

Software Engineer – Code Fusion Technologies Pvt. Ltd. May 2023 – Oct 2024

- Developed backend services using Java, Spring Boot, and MongoDB.
- Designed and implemented microservices-based architectures.
- Managed server deployments on Linux and cloud environments.

Network Administrator & Java Software Engineer – NIC ASIA Capital Ltd. Dec 2022 – Apr 2023

- Developed Java-based web applications using Spring Framework, Hibernate, and RESTful APIs.
- Automated tasks using Selenium and managed version control with Git.
- Monitored and maintained security operations including firewalls and network devices.
- Provided technical support and documented network/system changes.

IT Support Engineer – Casino Palace Ltd. Feb 2022 – Nov 2022

- Configured and maintained network devices, including APs and firewalls.
- Debugged Java code, maintained databases, and deployed web applications.
- Provided troubleshooting support for hardware, software, and network issues.
- Monitored and secured IT infrastructure, including Cloudflare and VNC servers.

Projects

- **MRI Tumor Detection System:** Built a deep learning pipeline using CNNs to accurately classify tumor presence in MRI scans; achieved 92% accuracy. (github.com/santosh5541/MRISYSTEM)
- **Precision-Driven Biometric Recognition for Dog Breed Identification:** Developed a deep learning pipeline using CNNs (InceptionV3/NASNetLarge) with 5-fold stratified cross-validation for robust evaluation; achieved 99.6% accuracy, precision, recall, and F1-score across 12 dog breeds. (github.com/santosh5541/Dog-Breed-Classification)
- **Power Plant Energy Management:** Built a Spring Boot-based application to optimize power plant operations, reducing fuel consumption by 15%. (github.com/santosh5541/Power-Plant)
- **Inventory Management System:** Created a full-stack web application with Spring Boot and React for real-time inventory tracking, enabling automated restocking alerts. (github.com/santosh5541/imsfinal)
- **Movie Recommendation System:** Implemented collaborative filtering and content-based algorithms to recommend movies, improving user engagement by 20%. ([movierecommendation](https://github.com/santosh5541/movierecommendation))

- **Smart Home Energy Optimization:** Designed an SAC-based reinforcement learning agent to schedule appliance usage, achieving a 30% reduction in peak electricity load. (github.com/amalsha27/RL-Project)
- **NLP to SQL Dashboard:** Developed an intelligent system that converts natural language queries into SQL, enabling non-technical users to interact with databases seamlessly through a web-based dashboard. It is mainly focused in RAG framework called Langchain (github.com/santosh5541/nlp-sql-dashboard)

Education

- M.S. in Computer Science (Expected 2026) – University of South Dakota
- Bachelor's in Information Management (Jan 2023) – Tribhuvan University
- High School in Computer Science (Jan 2017) – Liverpool International College

Skills & Abilities

- **Programming & Frameworks:** Python, Java, JavaScript, Spring Boot, PyTorch, Scikit-learn, AngularJS
- **Databases:** MySQL, MongoDB
- **DevOps & Tools:** Jenkins, Maven, Docker
- **Networking & Security:** Linux, Windows Server, Firewalls, Cloudflare, VPN
- **Automation & Testing:** Selenium, JUnit
- **Others:** Microservices, REST APIs, System Administration

Activities & Interests

Technology, Automation, Event management, Outdoor Recreation

Achievements

- Employee of the Month – NIC ASIA Capital Ltd. (Developed an automated IPO application system handling over \$2M in transactions)
- HackerRank Java Developer Badge: cfe6a5659220

References

- Saurav Aryal – HR Manager, F1Soft International Pvt. Ltd., Lalitpur, Nepal.
+977-98018-68503
- Sandeep Prasad Bhatt – CEO, Code Fusion Technologies, Kathmandu, Nepal.
+977-98512-48296
- Kuldip Kumar Chaudhary – HR Head, NIC ASIA Capital Ltd., Kathmandu, Nepal.
+977-98413-74023
- Nabin Rai – HR Admin, Casino Palace Pvt. Ltd., Kathmandu, Nepal.
+977-98438-72280
- Debesh Jha, Ph.D. – Assistant Professor, University of South Dakota, Vermillion, USA.
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I hereby attest that the above statements are true and correct
to the best of my knowledge.