

Sarbagya Gho Shrestha

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Tech Lead & Full Stack Engineer driving Nepal's digital transformation through innovative governance solutions. Builder and innovator with expertise in scalable systems, civic tech, and emerging technologies. Passionate about bridging hardware and software, with creative pursuits in music.

WORK EXPERIENCE

Ninja Infosys

Jun. 2025 – Present

Project Manager & Tech Lead | Kathmandu District, Nepal

- Leading technical architecture and project execution for Digital e-Palika platform serving **50+ municipalities** across Nepal, streamlining citizen services, revenue collection, and grievance handling.
- Architected and engineered **Integrated Content Management System (ICMS)** now powering **100+ government websites** nationwide with microservices architecture using Kafka and Kubernetes.
- Coordinate cross-functional teams, manage timelines, and align stakeholders to ensure successful delivery of features meeting real-world governance needs while maintaining system scalability and security.
- **Tech Stack: Next.js, NestJS, Kafka, Kubernetes, PostgreSQL, Docker, Redis, CI/CD**

Intensive Study and Research Center

Jan. 2025 – Jun. 2025

Full Stack Engineer & DevOps Lead | Kathmandu, Nepal

- Architected and deployed **digital profile systems for 10+ municipalities** including Pokhara Metropolitan City in just **4 months with 2-person team** (with Trilochan Bhusal), serving 100,000+ citizens.
- Engineered comprehensive **Survey Management System (SMS)** with custom ODK Fetcher, processing **100,000+ survey responses** with real-time analytics dashboards and live monitoring capabilities.
- Directed end-to-end DevOps pipelines (CI/CD, Docker, AWS EC2/S3, Jenkins) ensuring resilient systems for resource-constrained regions with 99.9% uptime.
- Led field training initiatives, empowering **300+ local officials and enumerators** with digital skills for sustainable civic digitization.
- **Tech Stack: Next.js, NestJS, tRPC, PostgreSQL, MongoDB, Docker, AWS, ODK Collect/Central, Nginx, PM2**

Mandala Foods

Present

Tech Lead & Optimization Engineer | Kathmandu, Nepal

- Leading technology and optimization initiatives for booming food systems startup founded by Dr. Robin Shrestha (Tufts University, USAID veteran) and innovative team focused on nutrition and circular economy.
- Architecting scalable technical solutions to support sustainable food systems and reduce agricultural loss and waste.

Ibtidaa Softwares Pvt. Ltd.

Oct. 2023 – Dec. 2024

Full Stack Developer & Tech Lead | Nepal (Hybrid)

- Developed and maintained "Bidesh" App/Website using Next.js for RP Srijan Way To Success.
- Built Event Management and Visualization Tool using Django and JavaScript for Shramik Sanjal with Chart.js integration.
- **Tech Stack: Next.js, NestJS, PostgreSQL, MongoDB, Express.js, Django REST Framework, Redux.js, Jenkins**

IEEE Pulchowk Student Branch

Apr. 2023 – Jun. 2024

Chair & Creative Director | Lalitpur District, Nepal

- Led IEEE Pulchowk Student Branch as Chair, organizing technical events, workshops, and coordinating student activities.
- Served as Creative Director managing visual communications and promotional content for the branch.

PointZeroo

Mar. 2022 – Sep. 2022

Frontend Developer | Nepal (Hybrid)

- Maintained e-commerce website and developed web application for SSoChe, Pulchowk Campus.
- **Tech Stack: JavaScript, HTML5, CSS, React, MongoDB, Node.js**

KEY PROJECTS

8-bit Breadboard Computer (Ben Eater Inspired)

Jan. 2024 – May 2024

6th Semester Minor Project, IOE Pulchowk Campus

- Built complete 8-bit computer from scratch using discrete logic ICs with team (Rohit Joshi, Yugal Pariyar).
- Innovatively created **custom 128-bit RAM module** due to IC unavailability, demonstrating problem-solving and determination.
- Implemented full architecture: ALU, control unit, registers, program counter, instruction decoder, clock module.
- Hardware-only project showcasing deep understanding of computer architecture from first principles.

Digital Profile Platforms – Live: pokhara.digprofile.com

Survey Management System – Live: duduwa-admin.vercel.app

ICMS Platform – Demo: sddodang.lumbini.gov.np

EDUCATION

Tribhuvan University, IOE, Pulchowk Campus

May 2021 – May 2025

Bachelor of Engineering (B.E.) – Electronics, Communication and Information Engineering | Lalitpur, Nepal

Achievements: IEEE Chair, Creative Director, Pulchowk Music Club Executive Member

SOS Hermann Gmeiner School

2019 – 2021

+2 Science (Physics and Mathematics) – Grade: A+ | Sanothimi, Bhaktapur

Achievements: Bestmanship Awardee 2019, Music Club President

TECHNICAL SKILLS

Languages: TypeScript/JavaScript, Python, C/C++, Golang, SQL, Shell Scripting

Frontend: Next.js, React.js, Redux.js, HTML5, CSS/Tailwind CSS, Responsive Design

Backend: NestJS, Express.js, tRPC, Django, Django REST Framework, Node.js, Microservices

Databases: PostgreSQL, MongoDB, Redis, SQL, Data Modeling

DevOps & Cloud: Docker, Kubernetes, Kafka, Jenkins, AWS (EC2, S3, Lambda), CI/CD, Nginx, PM2, Coolify

Data Systems: ODK Collect, ODK Central, Data Visualization, Real-time Analytics

Hardware & AI: Embedded Systems, Digital Logic, Computer Architecture, Machine Learning, UAVs, Avionics

AREAS OF INTEREST

Digital Governance: E-government solutions, civic tech, full-stack development for public administration

AI & Embedded Systems: Machine learning, hardware design, UAVs, avionics, IoT applications

Distributed Systems: Scalable architectures, microservices, Kafka, Kubernetes, system design

Creative Arts: Music production and performance, 100K+ views on Instagram as music artist

IMPACT & ACHIEVEMENTS

- **100+ government websites** powered by ICMS platform at national scale
- **50+ municipalities** digitized through Digital e-Palika platform
- **10+ municipal digital profiles** deployed in 4 months with 2-person team
- **100,000+ citizen records** processed and **300+ officials** trained
- **Custom 128-bit RAM** built for 8-bit breadboard computer project
- **100K+ views** as music artist on Instagram, blending technology with creative arts

*Empowering Nepal's digital transformation through innovative governance solutions.
Architecting the future of public administration with precision and purpose.*