

Rhishma Pandey

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Profile

Backend and firmware engineer specializing in ARM embedded Linux systems, with production experience shipping firmware and backend software for point-of-sale hardware. Comfortable across the stack, from low-level device firmware and GSM/networking integration to backend services (Python, Bun, TypeScript, PostgreSQL, MongoDB) and frontend (React, Flutter). Additional hands-on experience with PCB design (KiCad) and 3D design (Blender). Registered Computer Engineer, Nepal Engineering Council. Open to backend-focused and fullstack roles.

Experience

NepalDigital Systems

Firmware & Fullstack Developer

Feb 2026 – Present

Kathmandu, Nepal

- Built and maintained **Yeti Tunnel**, a reverse-tunneling service enabling secure remote access to deployed devices without public IP exposure.
- Implemented **Yeti GSM integration**, adding cellular connectivity (SMS/data) to embedded devices for out-of-band access and monitoring.
- Developed backend infrastructure for **garud.cloud**, a remote device access platform, focused on high availability and reliable connectivity to fleets of remote devices.
- Built end-to-end firmware and backend for a **POS system on the Aisino Q161** terminal, including payment processing (QR and other payment methods), from device firmware through to backend services.
- Designed backend log management infrastructure over **PostgreSQL** and **MongoDB**, handling ingestion, storage, and retrieval of thousands of device logs at scale.
- Architected and deployed backend infrastructure on **AWS** (EC2, S3, and related services), covering system design, deployment, and scaling of backend services.
- Developed and tested embedded Linux firmware against **QEMU**-emulated ARM targets, enabling fast iteration without physical hardware in the loop.

DevNest Solutions

Backend Developer Intern (Remote)

Aug 2025 – Feb 2026

Remote

- Contributed to backend development in a remote team setting, gaining hands-on experience with **React**, **Git/GitHub**, and **Docker** workflows.

Notable Projects

Kickbot Streaming Widgets

Interactive overlay widgets for livestreamers on the Kick platform

- Designed and built widgets used by thousands of streamers/viewers across the Kick platform.
- kickbot.com/widgets/bdb2efcc-... | kickbot.com/widgets/0c6ea73f-...

Sim8085

8085 microprocessor emulator – lexer, parser, two-pass assembler, and CPU emulator with a plugin API

- github.com/rhishmapandey/Sim8085

Skills

- **Firmware / Embedded:** ARM embedded Linux, firmware development, QEMU emulation, GSM/cellular integration, low-level device programming
- **Backend & Databases:** Python, Bun, TypeScript, Prisma, PostgreSQL, MongoDB, REST API design
- **Frontend / Mobile:** React, TypeScript, Flutter
- **Infrastructure:** VPS administration, Hostinger, AWS, Linux/Docker workflows
- **Hardware Design:** PCB design (KiCad), 3D design (Blender)

Education & Certifications

Bachelor of Computer Engineering (BCT)

Purvanchal Campus, Dharan

Apr 2021 – Apr 2025

- Registered Computer Engineer, Nepal Engineering Council (NEC)