

# MIRAJ BHATTARAI

Software Developer • AI/ML Enthusiast • Full-Stack Engineer

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## PROFESSIONAL SUMMARY

Results-driven Software Developer and AI/ML enthusiast with hands-on experience building full-stack web applications, data analysis tools, and IoT-based systems. Proven track record as a multi-hackathon winner with expertise spanning Python, React, Flask, and machine learning. Passionate about translating complex problems into elegant, user-focused solutions.

## PROJECTS

### QR-Based Digital Academic System 🏆 Winner – TechSprint Hackathon 2026 2026

[React](#) · [Vite](#) · [Tailwind CSS](#) · [Node.js](#) · [JavaScript](#)

- ▶ Built a full-stack web platform to replace paper-based lab submissions at Tribhuvan University, serving students, teachers, and external evaluators.
- ▶ Implemented unique per-student QR code generation enabling instant access to academic records; batch scanning reduced evaluation time by eliminating manual paperwork.
- ▶ Developed role-based portals (Student, Teacher, Evaluator) with real-time notifications, voice feedback for evaluators, and responsive mobile-first design.
- ▶ Delivered a production-ready build with 201+ commits across the team; deployed using Vite with Tailwind CSS and Framer Motion animations.

### SnapSpend – Financial Statement Analyzer 2025

[Python](#) · [Flask](#) · [Tesseract OCR](#) · [PyMuPDF](#) · [Pandas](#) · [Chart.js](#)

- ▶ Developed an intelligent web application that ingests bank statement images or PDFs and automatically extracts, categorizes, and visualizes transaction data.
- ▶ Integrated Tesseract OCR and PyMuPDF for dual-mode text extraction, processing both scanned images and digital PDFs with rule-based expense categorization.
- ▶ Built interactive dashboards with Chart.js pie charts showing spending breakdowns, net cash flow, and top expense categories for financial insight.

### Project Ecolog – Forest Fire & Intrusion Detection System 🏆 Winner – Tech Conclave 2024 2024

[Python](#) · [Raspberry Pi](#) · [Azure Custom Vision API](#) · [Azure Storage](#) · [OpenCV](#)

- ▶ Designed and built a Raspberry Pi-based environmental monitoring system combining real-time audio classification (gunshot / smoke detection) with computer vision for forest fire alerts.
- ▶ Integrated Azure Custom Vision API for smoke/fire image classification and Azure Blob Storage for remote image archival and analysis.
- ▶ System triggers hardware buzzers and sends live signals to a web dashboard, enabling remote real-time monitoring of protected forest zones.
- ▶ Contributed to a 4-member team that won Tech Conclave 2024 in the Technical Category at BPC Hackfest 2024.

### Personal Portfolio Website 2024 – Present

[HTML](#) · [CSS](#) · [JavaScript](#)

- ▶ Designed and developed a personal portfolio at [mirajbhattarai.com.np](https://mirajbhattarai.com.np) showcasing projects, skills, and achievements with a clean, responsive UI/UX.

## TECHNICAL SKILLS

**Languages:** Python, C, C++, JavaScript, Java, Dart

**Databases:** MySQL, SQLite

**Web / Frontend:** React, HTML5, CSS3, Tailwind CSS  
**Backend:** Flask, Node.js, .NET  
**Data / ML:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, TensorFlow, PyTorch, OpenCV  
**Languages:** Nepali (Native), English (Fluent), Hindi (Fluent)

**Tools:** Git, Figma, VS Code, Linux  
**Design:** UI/UX, Figma, Responsive Design

## EDUCATION

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### **B.Sc. Computer Science & Information Technology (Tribhuvan University)**

2023 – 2026

[Madan Bhandari Memorial College, Kathmandu](#)

CGPA: 3.0+ across all semesters • No backlogs

### **NEB (Higher Secondary / +2)**

2020 – 2022

[Liverpool International College, Kathmandu](#)

CGPA: 3.01

## ACHIEVEMENTS & EVENTS

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- ▶ 🏆 Winner – TechSprint Hackathon 2026 (Nepal Engineering College)
- ▶ 🏆 Winner – Tech Conclave 2024
- ▶ 🏆 Technical Category Winner – BPC Hackfest 2024
- ▶ 🎓 DataCamp Fellowship 2025
- ▶ Lead Organizer – MBMC IdeaX 2025
- ▶ OC Member – Hult Prize at MBMC 2025