Abhiyan Dhakal

Janagal, Banepa, Kavre, Nepal • +977 9847382531 • itsabhiyandhakal@gmail.com • linkedin.com/in/abhiyan-dhakal • orcid.org/0009-0003-3143-416X • https://abhiyan.me

Full Stack Developer

Full Stack Developer with **experience in designing scalable applications**, from **frontend to backend and IoT**. Skilled in **React, Node.js, FastAPI, Docker**, and **AWS**, with a strong foundation in databases and Linux. **Proven leadership** as KUCC President and hackathon lead, alongside **research experience applying AI to Nepal's legal domain**.

WORK EXPERIENCE

National Innovation Center • Nepal   Apr 2025 – Present

Established in 2012, the National Innovation Center, a non-profit sharing organization is dedicated to creating the culture of research and innovation in Nepal.

DevOps Engineer • Freelancer

- Managed deployment, VPS, and server security.
- Set up Nginx reverse proxy and static file serving.
- Implemented CI/CD pipeline, improving team productivity by 70%.

Peakvoyage   Oct 2024 – Present

Peak Voyage is a company dedicated to empowering clients through innovative design, development, and rapid execution, fostering strong relationships and prioritizing customer success.

Full Stack Developer • Part-time

- Built backend services with FastAPI and integrated FCM notifications with React Native.
- Designed and implemented ESP8266-based MQTT-SSL for AWS IoT Core.
- Created a Streamlit simulator for ESP8266 devices.
- Worked with Hono, Bun, TypeScript, and PostgreSQL for API services.
- Built 3D visualization components using Three.js.
- Contributed to modern frontend stack (React, Vite, shadcn/ui, Tanstack Query).

Wireless Inventories   Oct 2023 – Sep 2024

Wireless Inventories is a business that handles and manages sales and distribution of mobile phones.

Frontend Developer • Freelancer

- Built Inventory Management System from the ground up.
- Implemented multi-store functionality, user roles (admin, manager, employee), CRUD operations (brands, customers, inventories), and reports.
- Tech stack: Next.js, Redux Toolkit, TailwindCSS, Ant Design.

Sichu Nepal • Banepa, Kavre, Nepal   May 2024 – Jun 2024

Sichu Nepal is an e-commerce business that sells pop-culture related merchandise and

Full Stack Developer & Team Lead • Contractor

- Led the development of a multi-store e-commerce platform.
- Played a key role in designing and implementing both **customer view** and **admin view**, allowing administrators to manage categories, stores, products, and inventories.
- Led a team of 3 peers, guiding technical decisions and delivery timelines.
- Tech stack: Next.js, MUI, Node.js, Express, and MongoDB.

Techore Solutions • Nepal   **Jul 2023 – Oct 2023**

Techore Solutions is a tech firm that delivers innovative technology tailored to clients' needs, driving growth and efficiency.

Frontend Developer • Contractor

- Built a complete Management Information System Dashboard from scratch.
- Gained valuable experience in project management, team collaboration, and agile practices by using Jira, Slack, and Confluence daily.
- Tech stack: React, MUI, Redux Toolkit.

EDUCATION

Bachelors in Computer Engineering (Ongoing)

Kathmandu University School of Engineering • Dhulikhel, Kavre, Nepal   Dec 2021 - Feb 2026

SLC(10+2) in Physics

Banepa NIST • Banepa, Kavre, Nepal • GPA: 3.78/4.0   Jul 2019 - Sep 2021

School Education Examination (SEE)

Kabhre Secondary School • Budo, Kavre, Nepal • GPA: 3.8/4.0   May 2018 - Jul 2019

CERTIFICATIONS

Communicate using Markdown   Oct 2024
GitHub

KU HackFest 2024 Participation   Aug 2022
Kathmandu University Computer Club

PROJECTS

Revamp

Revamp is a goal setting webapp where users can create goals, associated tasks and todos, you can write daily, monthly and weekly journals, or it will be written for you based on your tasks. Also, we have social communities where you can invite people and uplift each other.

KU Pasal

This is a project that was created during the KU Hackfest 2022 hackathon. This is a full-stack e-commerce website, with frontend in React.

SSM

Smart Session Manager (SSM) is a tool designed to manage Tmux sessions e ciently, focusing on project-based session management. With SSM, you can easily navigate through sessions using simple commands and aliases.

Kass Text Editor

Kass Text Editor is a simple terminal-based text editor written in Rust. It is a simple text editor with basic functionalities like saving, opening, and editing files. It also has the additional feature of multiple tabs which you can switch between to be able to edit multiple les.

Power Menu

Developed with Tauri and Svelte, Power Menu offers a user-friendly interface through a system tray icon (app menu) as well as a windowed interface. to perform actions like shutting down, restarting, logging out, or suspending the system.

Abhiyan.zsh

Abhiyan.zsh is a custom zsh theme that I created seeking minimalism. It includes decorators for git branch, staged le count, unstaged le count and untract le count, username, current working directory and the time.

VOLUNTEERING & LEADERSHIP

Kathmandu University Computer Club   Feb 2023 - Present
- Dhulikhel, Kavre, Nepal
- **President (2025)** — Led the executive board and initiatives to foster a thriving tech community
- **Vice President & Treasurer (2024–25)** — Managed financials, contributed to strategic decisions, and supported overall operations
- **Executive Member (2023–24)** — Played an active role in organizing events and strengthening KUCC's mission

IT Meet 2024   Apr 2024 - Dec 2025
Financial Head • Dhulikhel, Banepa, Kavre
- Managed all financial aspects of the event, from budgeting to expense oversight
- Ensured financial transactions were transparent, accurate, and well-documented
- Coordinated closely with organizing team to align financial decisions with event goals

KU HackFest 2024   Aug 2024 - Nov 2025
Advisor • Dhulikhel, Kavre, Nepal
- Advised organizing team on technical and operational decisions.
- Mentored members to successfully execute a large-scale hackathon.
- Oversaw finances, with total expenses amounting to NPR 206,271.85 (excluding prizes).

KU HackFest 2023   Sep 2023 - Oct 2023
Technical Member • Dhulikhel, Kavre, Nepal
- Spearheaded the development of event website and application submission platform.
- Coordinated operations, from logistics to judging, for around 200 participants.
- Collaborated directly with MLH coach and stakeholders to align goals.
- Played a key role in delivering a smooth, impactful hackathon experience.

PUBLICATIONS

Feasibility of Artificial Intelligence Driven Analysis in the Context of Nepalese Legal System   Jun 2025
ICAIL 2025
- Designed an **AI-assisted legal analysis framework** tailored to Nepal's legal context

- Employed **machine learning models and Retrieval-Augmented Generation (RAG)** techniques to streamline legal processes and enhance information accessibility
- Transformed legal documents into vector data and leveraged **GPT-4o for query expansion** and **text-embedding-ada-002 for vector representation**
- Delivered strong performance across query types, with F_1 scores of 0.797 (rule-recall), 0.857 (rhetorical understanding), and 0.875 (interpretation)
- Contributes to integrating **AI technologies into the legal domain of Nepal**

SKILLS

- **Full Stack Web Development:** Ant Design, Express, FastAPI, Hono, MUI, Next.js, Node.js, React, Redux Toolkit, shadcn/ui, Tailwind CSS, Tanstack Query, TypeScript
- **Cloud, Deployment & DevOps:** AWS IoT Core, AWS Lambda, CI-CD, Docker, Linux, Nginx, Reverse Proxy
- **Databases & Storage:** Alembic, Drizzle, MongoDB, MySQL, Postgres, SQLite
- **IoT, 3D, and Specialty Tech:** Arduino IDE, C, ESP8266, MQTT-SSL, PlatformIO, Streamlit, Three.js
- **Tools & Communication:** Confluence, Git, Jira, Slack
- **Soft Skills & Leadership:** Collaborative Development, Communication, Deployment, Mentoring, Project Management, Security, Team Lead
- **AI & Data Science:** Data Mining, Machine Learning, Retrieval-Augmented Generation (RAG), Text Embeddings