

ABHISHEK NIRAULA

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ELECTRONICS ENGINEERING STUDENT FULL STACK WEB DEVELOPER

I am an Electronics, Communication, and Information Engineering student with a strong foundation in web development, IoT, and robotics. My expertise lies in building web-based solutions using Python, particularly with Django and Flask, along with modern front-end frameworks like Next.js and React.

Beyond software, I have a keen interest in Internet of Things (IoT) and Robotics, continuously exploring ways to bridge the gap between hardware and software. Additionally, I am expanding my skill set in data analysis using Python and SQL, aiming to leverage data-driven insights for efficient problem-solving.

With a passion for technology and innovation, I am always eager to learn, experiment, and refine my skills to develop practical and impactful solutions.

WORK EXPERIENCE

UI Designer | Web Developer



EXCESS (Electronics and Communication Engineering Student Society) Nepal

- Developed and deployed the official **Next.js** front-end website for EXCESS Nepal, ensuring mobile responsiveness and optimal user experience.
- Designed a modern UI/UX with Tailwind CSS, effectively showcasing EXCESS Nepal's mission, events, and key information.
- Integrated **Cloudinary** for dynamic image management, enabling seamless gallery updates without manual backend intervention.
- Highlighted strategic partnerships (e.g., **DataCamp Donates**) on the platform, enhancing visibility and engagement.

Web Developer | Overviewer



CS50xNepal

- Built and maintained the official **CS50 AI** website for EXCESS Nepal, streamlining access to course materials and enabling 90+ registrations for **X-Hack 3.0**.
- Optimized UX/UI with responsive design principles, reducing bounce rates and improving navigation efficiency.
- Oversaw CS50 AI classes as a technical assistant, resolving student queries and maintaining an organized learning environment.

Technical Co-ordinator

Robo Ramailo - CS50 AI Closing Ceremony

- Led robotics team in developing competition-ready soccer robots using **RC Controller**.
- Optimized robot functionality through iterative testing and product calibration.
- Upgraded playing arena with improved surface materials and playing medium.

EDUCATION

Institute of Engineering Purwanchal Campus

2024-Present

- Electronics, Communication and Information Engineering

Bal Kalyan Vidhya Mandir Secondary School

2022-2023

- +2 Computer Science

SKILLS

- **Backend Development:** Python web frameworks: Django, Flask (building scalable applications)
- **Database:** PostgreSQL (data analysis & large dataset management)
- **Frontend:** React, Next.js with TypeScript (responsive web interfaces)
- **UI/UX:** JavaScript, Tailwind CSS, Bootstrap, jQuery, Figma (Designing Interfaces)
- **Embedded Systems & IoT:** Microcontrollers & Robotics (Arduino, ESP32)
- **IoT protocols:** MQTT (emergency response systems)
- **Programming Languages:**
Python, JavaScript (full-stack development)
C, C++ (systems programming)
- **Soft Skills:**
Cross-functional team collaboration
Technical project coordination
Problem-solving & analytical thinking

PROJECTS

Wiki

- A web-based encyclopedia built as part of the CS50 Web Development course. Implemented features for creating, searching, and editing pages using Markdown language. Designed a user-friendly interface for seamless content management.

E-Commerce Bidding Platform

- Developed as a project for the CS50 Web Development course, this web application allows users to list products for bidding and place bids on active listings. Implemented an automated bidding system where the highest bidder wins. Designed a structured UI for seamless user interaction and transaction tracking.

C++ Music Player Application

- Built using C++ and the SFML library, this application features a user-friendly music player where users can upload and play their music. Designed an intuitive UI for seamless navigation and playback controls, ensuring a smooth listening experience.

Sanjeevani - Disaster and Emergency Response management System (Hardware+Software)

- A disaster and emergency response system hosted on the web that responds to the emergency SOS calls from sensors and dispatches emergency departments like Hospitals. Used flexible techniques like MQTT for SOS delivery from Sensors to central Database. Used Flask for development of web and Twilio Client for managing calls.

Robotic Arm

- Built a 3 Axis robotic arm with python Open CV that could be controlled with finger gestures with the use of different electronic components and techniques.

AWARDS

- Runner Up of Hardware Hackathon Conducted by EXCESS and Robotics Club, ERC.
- Winner of Mini Hackathon Conducted by EXCESS as part of CS50xNepal.
- Best Business Model - Category Winner ACES TechFest 7.0