

KALPIT DHAKAL

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PROFESSIONAL SUMMARY

Final-year BSc CSIT student with hands-on experience in full-stack web development, AI integration, and security-aware development. Proficient in the MERN stack, .NET, Java, and cloud platforms (Azure). Passionate about building scalable, maintainable software and applying emerging technologies – including photogrammetry, AR, and AI APIs – to real-world problems.

EDUCATION

Bachelor of Science in Computer Science and Information Technology Expected: Jan 2027

Bhaktapur Multiple Campus, Tribhuvan University

Relevant Coursework: Data Structures & Algorithms (C++), Artificial Intelligence (Python), Software Engineering, Web Development (JavaScript), Cloud Computing, Advance Java

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C++, C, C#

Web / Frameworks: MERN Stack (MongoDB, Express, React, Node.js), .NET MVC, Bootstrap, Angular

Tools & Platforms: Git/GitHub, Docker, Linux, Azure, PostgreSQL, MySQL, SQL Server

Concepts: RESTful APIs, OOP, Machine Learning, Photogrammetry, Augmented Reality, Web Security

PROJECTS

Digital Devalaya | *React, Node.js, Express, MongoDB, NodeODM, ARCore* GitHub

- Built the React frontend for a 3-person team project – a MERN web app showcasing photogrammetry-generated **3D models of Nepali temples** for cultural heritage preservation.
- Used **NodeODM** to generate textured 3D models from photos; led the integration of **ARCore** for in-browser AR viewing on mobile devices.
- Part of a 3-person team; personally responsible for the React frontend, UI/UX, and ARCore integration.

Chess Engine | *Java, Swing, MySQL, Alpha-Beta Pruning* GitHub

- Built a fully functional chess engine with complete rule enforcement including castling, en passant, and pawn promotion using **Java Swing** for the GUI.
- Implemented **Alpha-Beta Pruning** to optimize AI decision-making, reducing evaluated game-tree nodes by ~50% vs. standard minimax – improving move latency noticeably at depth 7.
- Integrated **MySQL** to persist game history and player statistics, enabling post-match replay and analysis.

CyberBrief | *.NET MVC, Bootstrap, SQL Server, Azure AI* GitHub

- Developed a news aggregator web app using **.NET MVC** with a responsive Bootstrap UI and SQL Server for persistent data storage.
- Integrated **Azure AI** to auto-generate article summaries, reducing average read time per article; deployed on Microsoft Azure for scalable, highly available cloud hosting.

ACHIEVEMENTS & ACTIVITIES

Futuristic Ideas 2024 • **Asian College of Management and Technology** • Sep 2024

- Won the Best Futuristic Idea Award for Digital Devalaya – a photogrammetry and AR pipeline for 3D cultural heritage documentation – judged by an industry panel.

CTF Competition • **Ullens College** • **Pentester Nepal** • Aug 2025

- Competed in a Capture the Flag challenge at Pentester Nepal's 12th anniversary event, covering Linux exploitation, web vulnerabilities, encoding/decoding, and authentication bypass.