

KUSHAL PATHAK

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SUMMARY*

Aspiring Software Developer with 5+ years of programming experience and a strong foundation in problem-solving and coding. Proficient in designing and implementing solutions through academic projects, personal initiatives, and coursework. Eager to apply technical skills, collaborate with teams, and gain hands-on industry experience. Committed to continuous learning and delivering impactful results in dynamic environments.

TECHNICAL SKILLS:

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

Web Technologies: HTML, CSS, Bootstrap, React, MERN Stack

Databases: MySQL, MongoDB

Frameworks: Express, .NET, Flask

Foundations: Machine Learning, Neural Networks, Calculus, Linear Algebra Fundamentals, Statistics & Physics

Capabilities: Building Full-Stack Websites, Desktop Applications, Graphics Visualizations, and Simulations

PROFESSIONAL EXPERIENCE

Freelancing

Gaindakot/Nepal

Simulation Developer

2024 – Present

Developed a **magnetic field simulation** to analyze ore depth using object-oriented design and technologies like p5.js, HTML, CSS, and JavaScript, enabling foundational research for ore-detecting devices.

Built a **seismic wave propagation simulation** to visualize wave behavior and assist geologists in seismic activity analysis. Achieved precise mathematical accuracy by deeply studying wave equations.

PROJECTS

Blood Donation Website

Designed and developed a platform that matches patients with optimal donors based on geolocation, reducing response times by 30%. Secured second place in a regional hackathon competition.

Digital Logic Simulator

Created an interactive simulator for designing and testing digital circuits, optimizing performance by 50% in worst-case scenarios using custom algorithms. Utilized technologies like PHP, MySQL, p5.js, HTML, CSS, and JavaScript for implementation.

LEADERSHIP EXPERIENCE

Birendra Open Source Club

Chitwan/Nepal

President

Mar 2023 – Sep 2024

Directed a team of 11 executives to organize 15+ workshops, hackathons, and events, enhancing open-source engagement across the campus. Mentored junior developers, resulting in a 40% increase in participation and project completion rates.

Saraswati Science Club

Gaindakot/Nepal

President

2016 – 2017

Organized weekly science activities and quarterly exhibitions, fostering creativity and teamwork among 9 members.

Pragati Baal Club

Gaindakot/Nepal

President

2015 – 2016

Spearheaded child-rights campaigns, improving community awareness and engagement.

EDUCATION

Tribhuvan University (BSc. CSIT)	2020 - <i>Present</i>
Gurukul College, +2 Level (Science)	2017 - 2019
Saraswati Niketan E.S (Upto SEE)	2004 - 2017

CERTIFICATIONS & ACHIEVEMENTS

Certifications:

- CS50x – Harvard University
- Complete Web Development Bootcamp – Dr. Angela Yu
- Microsoft Office Specialist for Office PowerPoint 2013 – Microsoft

Awards:

- Best Science Project Award – District Education Department
- Second Place, Provathon 2021 (Regional) – CSITAN Chitwan
- Best Presentation Award (+2 Level, 2018) – Gurukul College

Languages:

- Nepali(Native)
- English(Fluent)

Github: <https://github.com/Kushal-Pathak>

Interests: Programming simulations and games, stock market analysis, cycling, and exploring culinary experiences.