

Curriculum Vitae

Sushan Adhikari

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Portfolio: <https://sushan-adhikari.github.io/Portfolio-1/>

Linkedin: <https://www.linkedin.com/in/sushan-adhikari/>

GitHub: <https://github.com/Sushan-Adhikari>

Other Socials: <https://www.facebook.com/sushan.ad/>, <https://medium.com/@sushan.adhikari2060>

Professional Summary

Dynamic and results-driven **Computer Engineering student** at Kathmandu University with a proven track record in **AI, IoT, machine learning**, and **full-stack development**. Demonstrated excellence in presenting innovative AI solutions at international platforms, including the **Hult Prize Summit in Bangkok**. Strong leadership experience in managing tech projects, organizing large-scale events, and revitalizing tech communities. Passionate about leveraging technology to solve real-world challenges and highly motivated to broaden my academic and research horizons through the **exchange program at IIT Palakkad**, where I aim to collaborate with leading experts and explore advanced research opportunities.

Education

- **Kathmandu University, School of Engineering**
Bachelor of Computer Engineering
(Expected Graduation: February, 2026)
 - GPAs in various semesters:
 - ❖ 1st Semester: 3.97
 - ❖ 2nd Semester: 3.83
 - ❖ 3rd Semester: 3.88
 - ❖ 4th Semester: 3.95
 - ❖ 5th Semester: 3.88
 - Key Subjects: C, C++, Data Structures, Computer Networks, Database Management System, Operating System, Algorithms and complexity, and Machine Learning.
- **Viswa Adarsha Higher Secondary School**
+2 Science
(Completion Year: 2021)
 - GPAs:
 - ❖ Class 11: 3.81
 - ❖ Class 12: 3.64

- **Kanchanjungha Secondary English School**

Class 10

(completion year: 2019)

- GPA:
 - ❖ Class 10: 3.80

Academic Achievements

- Recipient of Mahatma Gandhi Scholarship in High School for 2 years.

Technical Skills

- **Programming Languages:** Python, JavaScript, C++, C
- **Frameworks & Tools:** PyTorch, Docker, FastAPI, Git
- **Technologies:** Machine Learning, Data Analysis, Web Development, Blockchain
- **Software:** MS Office, Visual Studio, MATLAB

Projects

- **Dr.Fish: AI and IOT-based Algae Bloom Prediction Platform**
Role: COO, Co-founder, presenter, Researcher, and ML Model developer
 - ❖ Developed an AI solution for detecting algae blooms and predicting fish diseases.
 - ❖ Implemented image analysis algorithms and IoT integration.
 - ❖ Presented at Hult Prize Summit in Bangkok, Thailand.
- **A Novel Approach to Predicting Hereditary Disease Risk Using HMMs, DNA Sequences, and ML**
Role: Lead Researcher
 - ❖ Utilized Hidden Markov Models in Machine Learning for DNA Analysis to predict hereditary disease risks.
 - ❖ Applied feature extraction techniques(GC Content, CpG islands, Methylation) for disease classification.
- **Automating Insurance Fraud Detection Process in Nepal**
Role: Researcher, ML Model developer
 - ❖ Utilized Data Analysis and ML Models to detect fraudulent activities in insurance claims.
 - ❖ Applied data cleaning and preprocessing techniques along with ensemble learning for training the model.
- **AgniNetra: AI and IOT-based Forest Fire Detection and Alarm System**

Role: Team Lead, Model developer, and presenter

- ❖ Developed an efficient computer vision model for detecting smoke and fire using YOLOV8.
- ❖ Implemented Alarm system, alert message with Real-Time data and coordinates of the location.

- **Cosmira: Interactive Solar System Orrery App**

Role: Model developer and deployment

- ❖ Built a 2D interactive orrery web app at NASA Space Apps Challenge using JavaScript, HTML, CSS, Astro, and Python.
- ❖ Designed to engage students in learning space science.

- **MastiskaTrack: A LangChain-Based Mental Health Assessment Tool**

Role: Presenter, Documentation, ML Model Developer

- ❖ Utilized GPT API with LangChain for mental health evaluation and assessments.

- **YourInternetCompanion: Social Media Platform for Hobby-Based User Recommendations**

Role: Full-Stack Developer (frontend, backend, model integration)

- ❖ Developed using Django (backend), React (frontend), and Python (recommendation model).

- **CrowdChain: A Blockchain Based Crowdfunding App**

Role: Full-Stack Developer(frontend, backend, deployment)

- ❖ Implemented Solidity for transaction processing and React for user interface.

- **A C++ based Vaccine Registration System**

Role: Full-Stack Developer (terminal-based frontend, logic implementation)

- ❖ Created a terminal-based system with features like login, registration, doctor booking, using file handling in C++.

Work Experience

- **Dr.Fish: Co-Founder and Chief Operating Officer (COO)**

2023 - Present

- ❖ Led ML model development, team management, and presented AI solutions at international platforms.
- ❖ Participated in the Hult Prize Summit in Bangkok, deploying a solution with 95% accuracy for algae bloom detection.

Leadership & Extracurricular Activities

- **Hult Prize**

Role: Presenter, Team Dr. Fish

- ❖ Led the team to victory in the on-campus round at KU and represented Nepal at the Hult Prize Summit in Bangkok, Thailand.
- **Health Informatics Community**
Role: Community Coordinator (2024 - 2025)
 - ❖ Revitalized the community at KU by organizing localization sprints (Bahmni, DHIS2) and hosting various informative programs.
- **KU Hackfest 2024**
Role: Internal Relations and Operations Lead
 - ❖ Led the end-to-end operations and internal communications for Nepal's largest student-run hackathon, managing judge coordination, logistics, and stakeholder engagement to ensure smooth event execution.
- **Social Clubs & Volunteering**
 - **IT Meet 2022**
Role: Volunteer
 - ❖ Assisted in organizing the Coding Challenge and supported event logistics for smooth execution.
 - **Kathmandu University Computer Club (KUCC)**
Role: Board Member for 2022-2026
 - ❖ Involved in decision-making, strategic planning, and active participation in club activities.
 - **Leo Club of Kathmandu University**
Role: Board Member from 2023 - present
 - ❖ Engaged in personal development, social awareness programs, plantation drives, and community service initiatives.
 - **Rotaract Club of Kathmandu University**
Role: Board Member for 2022
 - ❖ Contributed to meetings, leadership development, and social awareness projects.

Certifications & Courses

- DataCamp Certified in AI Fundamentals (DataCamp)
 - DataCamp Certified in Data Literacy (DataCamp)
 - Enterprise Design Thinking Practitioner (IBM)
 - Public Speaking Course (Eduta.org)
 - Principles of Effective Communication (Udemy)
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Competitions and Conferences

- **National Conference by Computational Mathematics Department at Kathmandu University**
Role: Presenter, Documentation, ML Model Developer
 - ❖ Presented the idea “A Novel Approach to Predicting Hereditary Disease Risk Using HMMs, DNA Sequences, and ML.”
- **Hult Prize Summit (Bangkok, Thailand)**
Role: Presenter, ML Model Developer
 - ❖ Presented and developed ML model for team Dr. Fish.
- **Founder’s Hub Conference**
Role: Presenter
 - ❖ Runner-up at the conference
- **NASA Space Apps Challenge 2024**
Role: ML Model Developer and Deployment
 - ❖ Winner of the People’s Choice Award
- **AI Crusade 2023**
Role: Presenter, Model Developer, Documentation
 - ❖ Health Track winner for “MastiskaTrack” at Nepal’s first AI Hackathon.
- **ICT Awards 2024**
Role: Presenter
 - ❖ Top 12 Finalist for ICT Awards 2024.

Ongoing Research (Not Published yet)

- **Translating Nepali Legal Documents to General English**
Supervisors: Dr. Rajani Chulyadyo from DOCSE KU
- **Dr.Fish: An Approach for Algae Bloom and Fish Disease Detection and Classification Using AI and IoT Based on Water Quality Parameters**
Supervisor: Prof. Dr. Gajendra Sharma from DOCSE at KU
- **Automated Insurance Fraud Detection**
Supervisors: Associate Prof. Dr. Rabindra Bista and Santosh Khanal from DOCSE at KU
- **A Novel Approach to Predicting Hereditary Disease Risk Using HMMs, DNA Sequences, and ML**
Supervisor: Dr. Hitesh Bhattarai from BioTech Department at KU
- **Exploring the feasibility of RAG System to Preserving Endangered Language**
Independent Research

Languages

- **English:** Proficient at Communication & Writing
- **Nepali:** Native
- **German:** Beginner

Additional Information

- **Hobbies & Interests:** Playing piano, hiking, reading, coding, problem solving, exploring new technologies.

References and Recommendation

- **Prof. Dr. Gajendra Sharma (Professor at KU DOCSE)**
(email: gajendra.sharma@ku.edu.np)
 - **Dr. Rajani Chulyadyo (Assistant Professor at KU DOCSE)**
(email: rajani@ku.edu.np)
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