

Sushan Adhikari

Computer Engineering Student

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Summary

Results-driven Computer Engineering student with a budding interest in AI and Data Engineering, and foundational experience in cloud infrastructure, automation, and end-to-end data workflows. Demonstrated leadership as Co-Founder and COO of Dr.Fish, leading the development of AI-powered solutions for environmental monitoring. Adept at designing scalable systems, collaborating across diverse teams, and delivering impactful technical solutions. Recognized with multiple awards, including the NASA Space Apps Challenge People's Choice Award, for innovative project leadership and technical excellence.

Education

- **Indian Institute of Technology Palakkad** *Jan 2025 – May 2025*
 - BTech (Exchange Semester), Computer Science and Engineering.
 - Focused on Advanced AI, Advanced Linear Algebra, Compiler Design, Graph Theory, Combinatorics, and Research exposure through the exchange program.
- **Kathmandu University, School of Engineering** *Jan 2022 – Feb 2026*
 - Bachelor of Engineering in Computer Engineering.
 - CGPA: 3.91/4.00; coursework in AI, Networking, Database, Advanced Calculus, Differential Equations, Statistics and Probability, Computer Architecture, Microprocessors, Embedded Systems, Graphics, Software Analysis, Testing, and Development.

Technical and Leadership Experience

- **AI and Data Engineer**, Mercuri.world (a non-profit initiative) *Jan 2025 – Present*
 - Volunteered to develop AI-driven recommendation systems and backend infrastructure for a global mental health platform.
 - Worked on strengthening cloud engineering, API design, and collaborative development in a mission-driven environment.
- **Co-Founder & COO**, Dr.Fish (an aquaculture startup) *Jan 2023 – Present*
 - Led the development of an AI+IoT solution for predicting algae blooms and fish diseases.
 - Gained leadership, research, and pitching experience representing Nepal at the Hult Prize Summit, Bangkok.

(Supervisor: Prof.Dr.Gajendra Sharma, Email: gajendra.sharma@ku.edu.np)

Research Experience

- **Legal NLP:**
 - Translating Nepali Legal Documents into English and vice versa.
 - Building a custom dataset, custom transformer, fine-tuning existing LLMs such as MBART50, and selecting the best model based on evaluation metrics.

(Supervisor: Dr.Rajani Chulyadyo, Email: rajani.chulyadyo@ku.edu.np , Advisor: Prof.Dr.Bal Krishna Bal, Email: bal@ku.edu.np)

Technical Skills

Programming:	Python, C++, JavaScript, Solidity, C
Frameworks/Tools:	Django, React, FastAPI, Docker, Git, Linux, Apache Airflow, Terraform
Machine Learning/Deep Learning:	PyTorch, TensorFlow, Scikit-learn, OpenCV, YOLOv8, Pandas, NumPy
Cloud/DevOps:	AWS, CI/CD, Containerization
Databases:	SQLite, PostgreSQL

Selected Projects

- **AgniNetra: AI & IoT-based Forest Fire Detection**
 - Developed a YOLOv8-based vision system with GPS-enabled fire alerts.

- Gained hands-on experience in deploying AI for environmental monitoring using edge hardware.
(a personal team project)
- **MastiskaTrack: Mental Health Assessment Tool**
 - Built a GPT-based LangChain tool for automated mental health evaluation.
 - Improved prompt engineering and API integration in NLP-driven applications.
(a personal team project)
- **JobRecommendation: Full-Stack Job Matching Platform**
 - Created a Flask web app with dashboards and job compatibility logic using SQLite and HTML/CSS.
 - Learned full-stack development independently, boosting backend and UI/UX implementation confidence.
(an individual project)
- **Insurance Fraud Claims Detection**
 - Built a full-stack app to identify fraudulent activities while claiming insurance.
 - Particularly focusing on the Health Insurance claim process in Nepal.
(supervisors: Assist.Prof.Dr.Rabindra Bista, Email: rbista@ku.edu.np, Santosh Khanal, Email: skhanal@ku.edu.np)
- **CrowdChain: Blockchain Crowdfunding Platform**
 - Built a decentralized app using Solidity smart contracts and React frontend.
 - Gained foundational knowledge in blockchain architecture and dApp deployment.
(supervisor: Deni Shahi, Email: deni.shahi@ku.edu.np)
- **Cosmira: Interactive Solar System App**
 - Created a 2D educational web app using JavaScript and Astro; won NASA Space Apps Challenge (People's Choice).
 - Enhanced frontend creativity and cross-disciplinary collaboration for science outreach.
(built on NASA Space Apps Challenge 2024)

Awards & Achievements

- **Hult Prize Campus Winner** – Represented Nepal at Hult Prize Summit, Bangkok
- **People's Choice Award Winner** – NASA Space Apps Challenge 2024 (Cosmira)
- **Finalist** – ICT Awards 2024 (Biggest Tech Award of Nepal)
- **Winner** – AI Crusade 2023 (Health Track)
- **Runner-up** – Founder's Hub Conference
- **Semi-Finalist** – KU Integration Bee (Nepal's first Integration Bee)
- **Recipient** – Mahatma Gandhi Scholarship (High School)

Leadership & Extracurricular

- **Internal Relations & Operations Lead, KU HackFest 2024**
 - Oversaw logistics, judge coordination, and stakeholder engagement for Nepal's largest student-run hackathon.
 - Enhanced event management and cross-functional leadership skills in a high-pressure environment.
- **Community Coordinator, Health Informatics, KU Computer Club**
 - Organized localization sprints for open-source health platforms like Bahmni and DHIS2.
 - Fostered community engagement and promoted open-source contributions in health informatics.
- **Board Member, KUCC, Leo Club, Rotaract Club**
 - Led initiatives in community service, social awareness, and technical events across multiple student organizations.
 - Developed leadership and organizational skills through active participation in diverse club activities.

Languages

English (Proficient), Nepali (Native), Hindi (Conversational), German (Beginner)

References

Available upon request.