SANJEEV KHATIWADA

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EDUCATION

Nepal Engineering College (NEC) | *Bachelor of Computer Engineering* — Sep 2019 – Aug 2024
- GPA: 3.65/4.00

The New Summit Secondary School | *High School (Science)* — Jul 2016 – Aug 2018
- GPA: 3.25/4.00

SKILLS

Languages: Python, JavaScript, HTML, C, C++, Bash, and SQL

Libraries/Tools: NumPy, Pandas, PyTorch, TensorFlow, Matplotlib, Scikit-Learn, Burp Suite, Django, Git, LaTeX

WORK EXPERIENCE

Things Cyber Pvt. Ltd | *Cybersecurity Intern* — Dec 2024 – May 2025
- Conducted vulnerability assessments and documented security issues in core banking software systems.
- Audited multi-factor authentication mechanisms, transaction logic workflows, and comprehensive audit trails.

PROJECT EXPERIENCE

NepBiz E-Commerce | *Python, Django, Scikit-Learn, Pandas, NumPy* — 2024
- Designed a memory-based k-NN collaborative filtering system within a full-stack e-commerce platform; benchmarked against popularity baselines, improving long-tail product recommendation precision by 20%.
- Integrated secure payment gateways (eSewa) and robust user authentication protocols using Django's built-in security features.

Fleet Management System | *Django, Flutter, REST API* — 2023
- Architected a comprehensive waste management ecosystem utilizing collection point aggregation and geospatial queries to optimize routes, while integrating real-time notifications and a waste-for-value module to incentivize segregation.

Self-Driving Agent Simulation | *Godot Game Engine, Python* — 2021
- Developed a physics-based simulation environment using NEAT algorithm to train autonomous agents for collision avoidance in dynamic driving scenarios.
- Implemented full vehicle dynamics, LIDAR-like sensor simulation with iterative training for trajectory refinement.

HONORS & AWARDS

Winner, Research Proposal Competition | IEEE Pulchowk Campus & CAIR Nepal — Feb 2025
- Co-authored the winning proposal *"Analyzing Consumer Behavior in the Digital Age,"* selected via peer review.

Academic Merit Scholarship | Nepal Engineering College — 2019 – 2024
- Received a 50% tuition waiver for four consecutive years, totaling approximately $2,500 USD for securing the highest cumulative GPA in the department.

Programming Award | Nepal Engineering College — Jan 2021
- Received award for top performance in college-level C++ and C programming competition.

ONGOING RESEARCH

Multimodal Out-of-Context Misinformation Detection | *Nepali Political News* — Present
- Investigate multimodal misinformation detection by fusing Vision Transformers (ViT) and Temporal Convolutional Networks (TCNs) to identify out-of-context fakes in Nepali media, while curating a novel annotated dataset to benchmark hybrid architectures against unimodal baselines (mBERT, ResNet).

LEADERSHIP & COMMUNITY ENGAGEMENT

NAAMII Open House Series — Aug 2025 – Present
- Engage in monthly sessions to share novel ideas and collaborate with the local research community, gaining insights into AI developments both within Nepal and globally.

Helambu Education & Livelihood Partnership (HELP Nepal) | *CS Mentor & Educator* — July 2025 – Present
- Mentor over 90 students in Computer Science and Mathematics, empowering them with technical proficiency and fostering a lasting interest in STEM careers.

Research Writing Workshop | *CAIR Nepal* — Feb 2025
- Completed an intensive workshop focused on academic research writing, literature review, and proposal drafting.

Center for Applied Research and Rural Development (CARRD) | *Executive Member* — May 2020 – Aug 2024
- Orchestrated research writing workshops and technical debate competitions, managing end-to-end logistics for student-led academic initiatives.