

Ashim Dahal

✉ codeashim@gmail.com ☎ +1 (769) 969-5007 📍 Hattiesburg, MS 📁 portfolio 🔄 projects in in/ashimdahal

EDUCATION

Bachelor's in Computer and Information Science,
University of Southern Mississippi
CGPA: 4.0

Aug 2023 – present | Hattiesburg, USA

TECHNICAL SKILLS

Languages: Python, C++, SQL, Javascript, HTML, CSS, PHP

Frameworks: PyTorch, Tensorflow, Keras, Open CV, Flask, FAST API, Matplotlib, Pandas, Numpy, Scikit-learn, JQuery

Technologies: Git, Github, PostgreSQL, REST, Linux, Machine Learning, Deep Learning, Prompt Engineering, NVIM, High Performance Clusters and Supercomputers

PROFESSIONAL EXPERIENCE

Undergraduate Research Assistant, University of Southern Mississippi Sep 2023 – present | Hattiesburg, United States

- Leading a team of 3 undergraduate students to detect previously unknown zero-day cyber attacks
- Handled heavily imbalanced dataset with 4.8 million entries with 2 anomaly samples using newly fabricated approaches
- Timely submitted team reports and updates while also guiding the team members on navigating resources
- Collaborating with graduate students (PhD) on research on 3-D computer vision (AI in AR and VR) and ML in neurology

Machine Learning Consultant, Data Research Council for Students Jul 2022 – Jul 2023 | Kathmandu, Nepal

- Packaged and installed over 10 Machine Learning microservices as internal tools for 3 different startups
- Taught in over 4 different bootcamps empowering 450+ high school, undergraduate and graduate level students with the fundamental concepts of python, machine learning and deep learning
- Traveled to different parts of the country taking on 10+ mini events on promoting data literacy to over 1000 students
- Scraped data to map landslides occurrence with weather conditions to detect landslides using deep learning with 99.9 percent accuracy for the first time in Nepal

Research and Development Intern, Robotics Association of Nepal Jul 2022 – Nov 2022 | Lalitpur, Nepal

- Worked on field tasks to teach the fundamentals of robotics and programming to 900+ students in 3 different schools
- Led in office tasks to create ML models with over 95% accuracy for projects like **Digital Voting System, Rotten Vegetable Scanner Robotic Arm and Face Recognition Attendance System**
- Designed and developed Devanagari OCR CNNs with over 97% accuracy and preprinted paper with **340+ reads | paper**

CONFERENCE AND PREPRINT PAPERS

[1] **Ashim Dahal** "Would you own a ROBOT? : A detailed research on public response to the nooks and crannies of owning a robot", 27 June 2021, (**presented in the Ninth National Conference of Science and Technology by Nepal Academy of Science and Technology**). [🔗](#)

[2] **Ashim Dahal**, Sushan Kattel "Predicting Handwritten Devanagari Characters using modified-Lenet Model Architecture" in Research Square, 11 Oct 2022, (**Citation :1 in an IEEE paper**). [🔗](#)

[3] **Ashim Dahal**, Prabin Bajgai, Dr. Nick Rahimi "Evolving KDD99: Pioneering Zero-Day Attack Detection Through Modulated Deep Learning Approaches", (**Under Review on Conference**).

[4] **Ashim Dahal**, Bishal Kharal, Anuj Khadka and Aashish Shah "Effectiveness of Native Language for Conversational Bots" in Research Square, 24 October 2022. [🔗](#)

[5] **Ashim Dahal** "Do you "Go big or go home" with Neural Networks?" in Research Square, 3 June 2022. [🔗](#)

ORGANIZATIONS AND SOCIAL WORK

Together We Learn, Founding President Jan 2022 – Aug 2023 | Kathmandu, Nepal

- Researched the human computer interaction and social aspect of adaptation of robots with over 300+ survey respondents **presented in NAST Conference (600+ reads) | paper** [🔗](#)
- Founded the close group of over 200 board and general members, managing over 30 technical newsletters on python alongside hosting 10+ mega events like outreach programs, bootcamps and interviews impacting over 1000 students
- Empowered and influenced 100+ tech enthusiasts and tech creators reaching to over 14 thousand organic audience per post

PROJECTS

Jelly | [github](#), Flask | Python | Hugging Face | BlenderBot | Javascript [↗](#)

- Developed and deployed Nepal's first romanized Nepali chatbot with over 500 weekly users (when active)
- Conducted research on Human Computer Interaction with native language and published paper with **500+ reads** | [paper](#) [↗](#)

torchy | [github](#), Python | PyTorch [↗](#)

- Reimagined PyTorch with a wrapper that has fit , _accuracy, validate, etc. increasing development speed by over 15%
- Increased the core functionality of torch with helper modules and published the project on pipy with **15 stars on github** [↗](#)

Jov.ai | [github](#) and [demo](#), mini gauGAN | Pytorch | Python | [↗](#)

- Built an AI powered image generator images with FID score of 5 and Inception Score of 8 generating images of Jupiter
- Effectively showcased the project resulting in our team being a **Global Nominee at NASA Space Apps Challenge 2022** [↗](#)

Frida | [github](#), Pandas | PyTorch | Matplotlib | FAST API | SQL | BS4 | NLTK [↗](#)

- Scraped latest climate change related news from google news and deployed an API to summarize them with NLP
- Curated an early flood warning system by analyzing water levels at different rivers and channel points in Nepal