Pramish Paudel

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Research Interests

3D Computer Vision - Developing faithful (to geometry), generalizable, and dynamic 3D representations.

Education

Pulchowk Campus, Institute of Engineering (IOE), Tribhuvan University 2020 to Ongoing
Bachelor's in Civil Engineering *Acceptance Rate: 1%*

Kathmandu Model College 2017 to 2019
+2 in Science *College Rank: 1*

Experience

Matrix Softech Private Limited | *CEO* April 2019 – August 2021

- At the age of 19, led a team of 14 to develop national-scale products for governmental bodies in Nepal.
- Spearheaded the development of "Mero Sadak: Pothole Complaint", a mobile application for Road Boards Nepal, incorporating AI for pothole detection.
- Implemented "Digital Profile" across more than five municipalities and VDCs in Nepal, enabling extensive data collection, storage, and processing for individuals, houses, flora, fauna, and more.

MeasureMe.AI | *Founder* August 2021 – January 2023

- Innovated a 3D reconstruction technology for automated child malnutrition assessment, dramatically improving the efficiency and reliability of current methodologies.
- Conducted a government-licensed pilot program in two municipalities, setting a precedent for technological intervention in public health.
- Represented the company at the global stage in Hult Prize Global Accelerator 2022, in Boston, US, showcasing the impact and potential of the technology on a worldwide platform.

Publications

1. Paudel, Pramish*, Khanal, Anubhav, Paudel, Danda, and Chatkuli, Ajad. "Accurate 3D Human Mesh from Gaussian Splatting". Submitted to *ECCV 2024*.
2. Acharya, Garima*, Paudel, Pramish*, and Paudel, Shukra Raj. "Roadmap to Reach Global Net-Zero Emissions for Developing Regions by 2085". Under review at *Nature Communications*.

Awards

- **Hult Prize Global Accelerator 2022, Boston, US**: Led my team to victory at the Kathmandu Regionals Summit, outshining over **30,000 teams** globally to secure a spot among the **top 16 teams worldwide**.
- **Huawei Seeds for the Future 2022**: Awarded recognition as **one of the top 7 computer science talents** nationwide.
- **Start-up Seed Fund Grant Recipient, 2023**: Secured a grant of **NPR 32,00,000** from the University Grant Commission, as a recipient among **18** across Nepal under the Entrepreneurship Support Program (ESP) initiative.
- **Microsoft Imagine Cup 2022**: Represented **South Asia** at the Microsoft Imagine Cup 2022, **Asia Regionals** .
- **Information and Communications Technology (ICT) Award, 2023**: Distinguished as a **finalist** among **nation's top twelve** innovators for Nepal's largest ICT Rising Star in Innovation Award.
- **Hack A Week 2018, 2019**: Secured first place in Hack A Week 2018 and 2019, dominating the **AI-themed hackathon** at LOCUS, Nepal's **largest tech event** organized by students.
- **KU IT MEET 2019**: Winner of the hackathon hosted by **Kathmandu University**, 2019.

- **Glocals' 20 Under 20, 2017**: Honored as a standout youth **under 20** for driving notable societal change in Nepal through **innovative information technology**.
- **Trinity SciTech Expo 2017**: Achieved first place at one of the nation's largest high school science exhibitions.

Projects

Radiograph Abnormality Detection (RAD) | *DenseNet, Python, Pytorch*
- Developed an abnormality detection system for X-ray images using DenseNet, which performed well in competitions.
- Combined multiple datasets to improve the model's accuracy and robustness.
- Won first place at the KU IT MEET 2019 and Locus 2019 AI hackathons.

VAE GAN Anime Image Colorizer | *Variational Autoencoder, GANs, Python, Pytorch*
- Created an image colorization tool with Variational Auto Encoders and Generative Adversarial Networks.
- Won the Locus 2018 national level hackathon while in high school.

AutoDiff Package | *C++, Dual Number Automatic Differentiation* GitHub Repo
- Built an automatic differentiation package in C++ using dual numbers for complex computations.

Blockchain from Scratch | *Python, Proof of Work* GitHub Repo
- Worked in a team to build a blockchain system, focusing on proof of work algorithms.
- Deepened understanding of blockchain fundamentals through hands-on development.

Vicaaya - Movie Search Engine | *React, Scrapy, Elasticsearch, Kibana, DigitalOcean*
- Developed a movie search engine, scraping data with Scrapy and using Elasticsearch for search.
- Deployed and managed the application on DigitalOcean VPS for high availability.

Carduino | *Arduino, Computer Vision, Ultrasonic Sensing*
- Designed a mini self-driving car model, utilizing a smartphone camera for path segmentation and tracking on a predefined track.
- Incorporated ultrasonic sensors for obstacle detection, enhancing the model's navigational capabilities in real-time environments.
- Awarded at the Trinity SciTech Expo for innovative application of technology in a high school exhibition project.

Proto News / Khabar Sanjal | *Firebase, Reach Native, Android, Flask, API Development*
- Created a news app for Nepalese abroad **at age 15**, reaching over 20,000 downloads.
- Used Flask for backend services and Firebase for real-time data and user engagement.