

# Anju Chhetri

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## EDUCATION

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- **Pulchowk Campus - Institute of Engineering, Tribhuvan University** 2019-2024  
*B.E in Electronics, Communication and Information*

## WORK EXPERIENCE AND RESEARCH

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- **Nepal Applied Mathematics and Informatics Institute for Research (NAAMII)** August 2023 - Present  
*Research Intern, Advised by Dr. Binod Bhattarai* Lalitpur, Nepal
  - Contribute to projects in the domain of active learning, with a particular emphasis on implementing and analyzing results for various sampling techniques for multi-class object detection tasks.

## PROJECTS

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- **Real-Time Visual Element Generation Using GANs** December 2022 – April 2023  
*Academic Project*
  - Tools & Technologies used: Python, PyTorch, Unity, Barracuda
  - My team and I developed a real-time neural rendering technique for generating realistic grass in video games. My task was to experiment with existing architectures, perform result analysis, and design new architectures that achieved both visual fidelity and low inference time.
- **Depth Estimation Using Stereo Vision** April 2022 – June 2022  
*Personal Project*
  - Tools & Technologies used: Python, OpenCV, PyTorch, MATLAB
  - Worked on multi-view geometry problem and object localization using stereo vision for *ABU Robocon 2022*.
  - Created a custom dataset of 3000 images for ball localization.

## TECHNICAL SKILLS AND INTERESTS

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**Language:** Python, LaTeX, C/C++, MATLAB  
**System:** Linux, Windows  
**Software:** Arduino IDE, Visual Studio, Git  
**Machine Learning Framework:** PyTorch  
**Computer Vision:** OpenCV, Stereo Geometry, Object Localisation

## AWARD AND ACHIEVEMENTS

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- 2nd Runner up in **Hacking for Humanity 2023**, Nepal's largest all female hackathon February 2023
  - Tools & Technologies used: IMU sensor, GSM & Bluetooth module, C++, Python, Pytorch
  - Contribution:
    - \* Prototyped the device on a PCB board, integrating IMU sensor, GSM, and Bluetooth modules.
    - \* Created a dataset by collecting 6-axis motion data from the IMU sensor, capturing various movement patterns.
- Winner in **Ace Ignite 2022** November 2022
  - Tools & Technologies used: LoRa(Long Range) & GSM module, C++
  - Contribution:
    - \* Designed a sensor interface between LoRa and GSM module to send real time coordinates(longitude and latitude) to the computer device.
- Represented Nepal in **ABU-Robocon 2022** August 2022
  - Achieved 3rd place out of 13 teams representing 12 countries, along with a prestigious "*NAGASE AWARD*" for Nepal.
  - Technical Contribution:
    - \* Developed a robot vision system using stereo vision and object localization to accurately locate the ball in the opponent robot's head.
- Receiptent of **Mahatma Gandhi Scholarship** 2017-2018
  - Awarded the prestigious Mahatma Gandhi Scholarship (2017-2018) and featured in the magazine published by Ex-Army Association Nepal.

## COMMUNITY

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- Event Manager *December 2021 - February 2023*  
IT Club, Puchowk Campus
  - Reached out to college administration to secure event venues within the campus.
  - Connected with speakers and guests, bringing diverse voices to our events.
  - Managed social media accounts, keeping an online presence of our community.
  
- Student Member *December 2019 - August 2022*  
Robotics Club - Pulchowk Campus
  - Technical Skills:
    - \* Microcontroller: Arduino, Raspberry Pi Pico
    - \* PCB design and Soldering (using KiCad software)
  - Volunteering Activities:
    - \* Delivered an introductory robotics session in "*Milestone School*" and "*Xavier International College*".
    - \* Instructed 30+ students in "*Advanced C Workshop*" and "*Robocamp 2023*" organised by IT Club and Robotics Club at Pulchowk Campus.