

ABHIJAN WASTI

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EXPERIENCE

Machine Learning and Artificial Intelligence Intern – Owl Autonomous Imaging, Fairport, NY Jan 2022 – Current

- Implemented semantic segmentation network using thermal images of off-road terrain driving data to generate traversability maps for visual odometry
- Designed and developed an inhouse image quality measurement technique to assess and benchmark lens quality and perform focus calibration

Graduate Research Assistant – Rochester Institute of Technology (RIT), Rochester, NY Aug 2021 – Current

Sponsored by Meta Reality Labs

- Worked with a team on the automation of synthetic image data set generation for a semantic segmentation network and improved pipeline performance
- Performed data analysis and visualization of time series gaze data from a Pupil Labs eye tracker to understand human behavior

Machine Learning Engineer Intern – FuseMachines Inc., Kathmandu, Nepal Feb 2021 – Aug 2021

- Worked with a team to deploy a natural language sentiment analyzer capable of accurately classifying emotions with close to 90% accuracy
- Optimized machine learning techniques like SVD and Random Forest using techniques such as SGD and ADAM to produce several modules for complex production applications

SKILLS

Python (OpenCV, numpy, pandas, matplotlib, sklearn, PyTorch, Tensorflow, keras), **Blender**, **C** (freeRTOS, OpenGL, GLSL, OSL), **C++** (OpenCV), **git**, **Linux** (bash), **Eye Tracking** (Pupil Core), **Unity**

EDUCATION

Master of Science in Imaging Science

Rochester Institute of Technology (Advisor: Gabriel Diaz) - Full Scholarship

Rochester, NY

(GPA: 3.85) Expected 2023

Bachelors of Engineering in Electronics and Communication Engineering

Institute of Engineering, Tribhuvan University - Full Scholarship

Kathmandu, Nepal

2019

Relevant Courses: Deep Learning, Image Processing, Computer Vision, Pattern Recognition, Artificial Intelligence, Probability and Statistics, Big Data, [Machine Learning](#), [Computer Vision](#), [Neural Network and Deep Learning](#), [Improving Deep Neural Networks](#)

PROJECTS

Halftoning Library

- Authored an open-source python library that can perform halftoning as well as the removal of halftone of images using Fourier mathematics for digital image restoration from printed media

Pixelation Shader

- Implemented a GLSL-based pixelation shader for Unity with support for dynamic palette selection, adjustable pixel resolution, a Sobel-based edge detection, and provision to adjust edge color

Aerial View-Based Guidance System

- Designed and implemented a semi-autonomous two-vehicle navigation system capable of guiding a ground vehicle with dynamic feed from the aerial vehicle

ORGANIZATIONS

AWARE-AI NSF Research Traineeship (NRT) - RIT

2022 – Current

- Participating in NSF-funded research traineeship for developing responsible, and human-aware AI

Board Member - Rotary Club of Kathmandu

2018 - 2021

- Collaborated with over 120 clubs from all over the world to publish 22 bulletins as chief editor

President - Robotics and Automation Center

2017 - 2018

- Led the club and managed funds worth \$3000, organized training and competitions for 30+ students