

# Mazeyar Moeini Feizabadi

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## EDUCATION

### UNIVERSITY OF BOLOGNA

#### MSC IN ARTIFICIAL INTELLIGENCE

Bologna, Italy

93/ 110

2021 - 2024

### HABIB UNIVERSITY

#### BS IN COMPUTER SCIENCE

Minor in Mathematics

Karachi, Pakistan

Dean's Honour List

CGPA: 3.62 / 4.0

2017 - 2021

## ACADEMICS

### GRADUATE

Cognition and Neuroscience

Nature Language Processing

Computer Vision

Combinatorial Optimization

AI in the Industry

### UNDERGRADUATE

Introduction to Deep Learning

Mathematics of Machine Learning

GPU Accelerated Programming

Computer Architecture

Real Analysis

## SKILLS

### PROGRAMMING

Over 5000 lines:

Python • Shell • JavaScript

C • Git •  $\LaTeX$

Over 1000 lines:

TensorFlow • miniZinc • CUDA

HTML • Prolog • Spatial Analysis

### LANGUAGES

English - Native

Farsi / Persian - Proficient

Italian - Elementary

### INTERESTS

Swimming • Chess • Piano

Aerospace • Violin

Architecture • Photography

## EXPERIENCE

### ROCK ROBOTIC | CV RESEARCHER (SfM - GAUSSIAN SPLATS)

August 2024 - November 2024 | Mountain View , USA, Remote

- Contributed to the development of large-scale Gaussian Splats, resolving challenges in scalability and computational efficiency.
- Focused on achieving SfM algorithm convergence for large-scale scenes and enhancing geometric accuracy through sensor fusion optimization.

### FARMEVO.AI | COMPUTER VISION AND GIS RESEARCHER

March 2024 - July 2024 | NYC , USA, Remote

- I applied the latest computer vision image matching techniques to traditional Geographic Information System (GIS) problems, significantly enhancing crop yield prediction accuracy.
- I developed efficient drone flight protocols that minimized data collection, flight time, and costs. This innovative AI-GIS integration reduced farmers' computational overhead.

### EYECAN.AI | COMPUTER VISION RESEARCH INTERN

April 2023 - February 2024 | Bologna , Italy

- Worked on optimizing the SOTA NeRF architectures focusing on relighting through shadow mapping.
- Successfully demonstrated that my NeRF architecture beat the previous SOTA on 20/20 scenes.
- Advised by Luigi di Stefano as a part of my Master's thesis named: **Relighting Neural Radiance Fields Leveraging Shadow Mapping.**

### AFINITI | DEVOPS INTERN

July 2019 - September 2019 | Karachi, Pakistan

- Wrote a python script to create CMake files given a file dependency graph in order to more quickly parallel compile our code.
- Wrote a bash script using Ansible to configure Kubernetes on multiple worker and master nodes using a single configuration file.

## PROJECTS

### BROWSERGAN | COURSE RESEARCH | GITHUB

proposed by Ian Goodfellow et al in Generative Adversarial Nets (2014). This implement can generate a single latent space variable or it can linearly interpolating between coordinates in z space. The model is processed through ONNX.js and can run inference at .2 milliseconds.

### ASCIIVIDEO | INDEPENDENT RESEARCH | GITHUB

An open source Python project used for encoding any video format into ASCII text. This was achieved through efficient image processing with python libraries such as PILLOW, OpenCV, and Numpy.

### RISC-V PROCESSOR | COURSE PROJECT | GITHUB

The pipeline implementation of a RISC-V processor in verilog with working instruction memory, registers, ALU, and parser.