

# MOHIT POUDEL

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## RESEARCH EXPERIENCE

*Graduate Research Assistant*

Jan 2024 – Present

**Alvarado-Serrano Lab, Ohio University** | Athens, OH

- Leading a Next-Generation Sequencing based diet metabarcoding project for the Department of Natural Resources as part of the master's thesis by developing a bioinformatics script to answer ecological questions through optimized genomic approaches.

*Junior Research Intern*

Jan 2023 – Jul 2023

**Centre for Biotechnology** | Chitwan, Nepal

- Involved in conducting DNA extraction and PCR from fecal samples for the diet study of *Panthera Uncia* in Nepal.

## TEACHING EXPERIENCE

*Graduate Teaching Assistant*

Fall 2023

**Department of Biological Sciences, Ohio University** | Athens, OH

- Led the undergraduate course "Biological Sciences Lab I (BIOS 1705)", guiding over 40 students for hands-on biological experiments; assisted in the designing and grading of exams, lab reports and assignments.

## RELATED EXPERIENCE

**Metagenomic Analysis of Environmental Samples** [LINK]

Fall 2024

- Reproduced the bioinformatics analysis of a metagenomic study by developing a Bash pipeline with Conda environment management for Illumina data, performing quality control, trimming, assembly, taxonomic assignment, and abundance visualization of microbial species present in the samples.

**Ecological Model Simulator** [LINK]

Fall 2023

- Built a web application with python that explains and simulates a mathematical model of interspecific competition based on the input values set by the user.

## RELEVANT SKILLS

**Technical:** Python, R, Bash, Git, High Performance Computing (Slurm), Unix System, ArcGIS Pro (Basic)

**Laboratory:** DNA extraction, PCR, Gel Electrophoresis, Cell Culture, Western Blotting, SDS Page

**Bioinformatics:** Next-Generation Sequencing Data Analysis, Workflow Management System (Snakemake)

## EDUCATION

*Master of Science in Biology*

Anticipated Graduation: Aug 2025

**Ohio University** | Athens, OH

Major: Ecology and Evolutionary Biology

Advisor: Dr. Diego F. Alvarado-Serrano

Thesis: Fecal Findings: Investigating Spatial Variability in Diet Composition of Two Sympatric Predators

*Bachelor of Science in Agriculture*

Dec 2018 – Nov 2022

**Agriculture and Forestry University** | Chitwan, Nepal

Thesis: Farmer's Perception On Pollinators In Seed Production Sites At West Rukum, Nepal

## ACHIEVEMENTS & EXTRACURRICULARS

- Awarded with a Merit-Based Undergraduate University Tuition Scholarship (2018 – 2022).
- Mentored over 25,000 high school students of Nepal for their state-level exam preparation during the Covid-19 Lockdown by creating a YouTube Channel 'Pathsala Online' [LINK].