

Curriculum Vitae

Education

University of Nebraska-Lincoln

PhD, Biological Engineering · Aug 2024 – Present

- Minor: Computer Science
- Advisor: Dr. Tami Brown-Brandl
- Dissertation: Techniques in precision poultry management
- Expected Graduation: May 2027 · GPA: 3.952

Virginia Tech, Blacksburg, VA

Master's Degree, Crop Soil and Environmental Science · Jan 2022 – Feb 2024

- Thesis: Robotics Applications in Precision Spraying
- Graduate Certificate in Data Analytics & Artificial Intelligence, 2023

Tribhuvan University, Nepal

Bachelor's Degree, Mechanical Engineering · 2015 – 2020

Research Experience

Research Assistant — Animal Management Innovation Lab, UNL

2024 – Present

- Develop deep learning-based computer vision pipelines for precision poultry management
- Collaborate on data collection, analysis, literature review, and manuscript preparation

Research Assistant — Automated and Connected Technologies Lab, Virginia Tech

2022 – 2024

- Developed ML/DL computer vision pipelines for automated fruit counting
- Robotics software development, system integration, and sensor network development

Professional Experience

Software Engineer — West London Immigration Services UK

Jan 2021 – Dec 2021

- Migrated legacy CakePHP codebase to modern MVC PHP framework
- Designed database, UI, and automatic emailer for enquiry management system

Skills

- **Programming:** Python · C++ · JavaScript · PHP 8 · Laravel · MATLAB · R · SQL
- **Deep Learning & Computer Vision:** PyTorch · Image Segmentation (UNet) · Object Detection (Mask R-CNN, YOLO) · OpenCV · Image Processing · Data Visualization
- **Robotics:** Robotics Operating System (ROS) · Sensor Integration

- **Operating Systems:** GNU/Linux · Mac OS · Windows
- **DevOps & Tools:** Docker · Shell · AWS · CI/CD · GitHub · Data Engineering Pipelines

Leadership

- Vice-President, Nepalese Student Association at UNL (2024 – Present)
- Graduate Student Mentor, UNL BSE Go Big Red Summer Camp
- Volunteer, USPLF 2025 Conference

Memberships

- Student member, American Society of Agriculture and Biological Engineers (ASABE)
- Registered Engineer, Nepal Engineering Council