

# MARY NANSIKOMBI

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## EDUCATION

### Oregon State University

Expected graduation date August 2025

B.S. in Computer Science(Honors) | Minor in Business

GPA 3.72 (Honor roll)

- **Relevant Coursework:** Data Structures,Computer Architecture and Assembly Language ,Analysis of Algorithms,Introduction to Security,Operating Systems,Software Engineering Fundamentals

## WORK EXPERIENCE

### Agaid Institute(National AI Research Institute for Transforming Agricultural Workforce and Decision Support)

Pullman, WA

Machine Learning Intern

June 2024 - Aug. 2024

- Developed deep learning models using **Faster R-CNN**, **PyTorch**, **TensorFlow**, and **NumPy**,and RGB imagery achieving 86% recall in wheat yield estimation predictions.
- Utilized **ML algorithms(SVM)**, optimizers and non maximum suppressors to reduce overlap between predicted wheat bounding box objects thus maximizing accuracy.
- Presented at the AgAID Symposium, teaching graduate students at Washington State University how to train and validate deep learning models, accelerating model development across labs.
- Developed a custom dataset class to streamline model training preparation and enhanced code reusability through object-oriented programming (**OOP**) principles.

## CLASS PROJECTS

- Developing a front-end system for a resume application using Python, JavaScript, HTML, and CSS to help students streamline job applications.
- Developed a health metric tracker using React, Node.js, and JavaScript to monitor heart rate, sugar, and pressure, improving user health outcomes.
- Developing a front-end system for a resume application using Python, JavaScript, HTML, and CSS to help students streamline job applications.
- Gained experience in low-level systems programming by developing solutions for coding projects in C.
- Increased software reliability through bug resolution, testing, and root cause analysis.
- Improved time efficiency through use of optimized data structures for complex problems
- Developed client-server technologies using REST APIs, Node.js, and PHP for web applications.
- Executed subprocesses with shell scripting and multithreading, optimizing memory via parallel processing.
- Ensured thread safety using semaphores in a spin open-close mechanism.
- Enforced privilege separation between kernel and application for secure operations.
- Developed unit tests in JavaScript using Jest to verify the presence and functionality of application features, ensuring accurate performance.
- Developed integration tests with Jest to validate application features, ensuring proper functionality of integrated components.
- Developed end-to-end tests with Cypress to ensure full application functionality, deployed using GitHub Pages with CI/CD integration.

**Technical Skills:** Python,Java Script,React JS,Tensor flow,NumPy,Node.JS,HTML,CSS,C,C++,Git,Rest API,Agile,CI/CD,ReactJS,Linux,Windows

