

MARY NANSIKOMBI

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EDUCATION

Oregon State University

Anticipated graduation date August 2025

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

GPA 3.76

- **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

Computer Science Intern (AI department)

June 2024 - Aug. 2024

- Leveraged machine learning algorithms, such as SVM, and optimizers to reduce overlap in predicted bounding box objects, maximizing prediction accuracy
- Delivered presentations at the **AgAID Symposium**, educating graduate students on training and validating deep learning models, fostering a collaborative learning environment and enhancing model development.
- Created a custom dataset class that streamlined model training preparation, showcasing object-oriented programming principles that support efficient project execution and reusability.
- Developed deep learning models using Faster R-CNN, PyTorch, TensorFlow, and NumPy, achieving an **86% recall** in wheat yield estimation predictions, directly contributing to impactful agricultural solutions.
- Utilized github and VS code for code migration from device to device to ensure proper compatibility of environments across different platforms.

CLASS PROJECTS

- Developed client-server technologies using **REST API**, **Node.js**, and **PHP** for web applications contributing to user-friendly interfaces and functional backend systems.
- Creating a front-end system individually for resume applications with Python, JavaScript, HTML, and CSS to streamline job applications for students through keyword matching thus enhancing user experience by 20%
- Developed unit and integration tests in JavaScript using Jest to verify application features and component integration, ensuring accurate quality performance and functionality of features
- Developed end-to-end tests with **Cypress** to ensure 95% full application functionality, deployed using GitHub Pages with **CI/CD** to ensure delivery of reliable and user-centered products
- Utilized memory management techniques through parallel processing leading to faster encryption and decryption of security projects optimizing faster performance
- Co-developed a health metric tracker microservice using React, Node.js, and JavaScript within an **Agile framework**, demonstrating adaptability and collaboration in fast-paced environments.
- Ensured proper development of system calls by implementing file management, communication, and information maintenance processes using signal processing techniques to solve robust engineering problems.
- Improved problem-solving efficiency by 20% through implementing data structures like **lists**, **stacks**, **queues**, and **dictionaries** using computer science principles enhancing time and space complexity
- Identified and resolved software bugs using VS Code debugger, valgrind and root cause analysis ensuring projects met quality standards and operational requirements.
- Gained experience in low-level systems programming through various coding projects in C, thus grasping strong computer science fundamentals.

- ## LEADERSHIP

- Technical Skills and languages:** Python,Java Script,React JS,Tensor,Agile flow,Numpy,Node.JS,HTML,CSS,C,C++,Git,Rest API,Agile,CICD,ReactJS,Linux,Windows