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.

- Simulted menu creation using OOP principles and use of databases to create restaurant systems that monitor supply, sales and inventory

LEADERSHIP

- Treasurer Adoptive Technology Engineering Network September 2023-September 2024
- Public Relations Officer OSU App Club September 2022-September 2023
- Association of computing machinery

  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