

Masumbuko Alulea

Software Engineer Intern

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Sioux Falls, SD 57106

SUMMARY: Motivated undergraduate with strong programming, data analysis, and AI skills, actively seeking an internship to apply and further develop these abilities in a dynamic tech environment while contributing to innovate projects and gaining valuable industry experience

EDUCATION

South Dakota State University, Brookings SD

Bachelor of Science in Computer Science

Expected Graduation: May 2026

COURSES: Data Structures, Database Management Systems, Object-Oriented Programming, Software Engineering, Software Project Management
Computer Architecture, Operating Systems, Discrete Mathematics

SKILLS

Programming & Scripting: Python, C++, C#, C, Assembly, Verilog, JavaScript, SQL, Bash/Shell Scripting

AI & Machine Learning: TensorFlow (Basics), Scikit-learn (Basics), Stable Diffusion, Ollama, Google AI Studio, OpenCV, Pandas, NumPy

Software & Development Tools: Visual Studio, VS Code, Linux, Docker, Git, GitHub, Jupiter Notebooks, PowerShell, Quartus Prime, PgAdmin

Web & Application Development: .NET, Django, RESTful APIs, UI/UX Design, Figma, Cloudflare, HTML, CSS, Chrome DevTools

Databases & Data Management: PostgreSQL, MySQL, MongoDB, Data Analytics, Data Visualization

Additional Skills: Agile/Scrum, Cybersecurity Basics, Microsoft Office, Slack, Teams, Customer Service

PROJECTS

Diabetes Prediction System [[GitHub Repository](#)]

January 2025

- Engineered a hybrid ML pipeline combining Random Forest, XGBoost, and Neural Networks, improving prediction accuracy to 78%
- Built an advanced data preprocessing with missing value imputation, feature scaling, and SMOTE balancing, enhancing model robustness
- Optimized Random Forest hyperparameters using RandomizedSearchCV, achieving a 15% performance boost over baseline models
- Designed an interactive patient risk prediction system, leveraging a trained model to provide real-time diabetic/non-diabetic diagnoses
- Enhanced model interpretability by identifying top contributing features using feature importance analysis in Random Forest and XGBoost

Portfolio Website [[Live View](#)]

June 2024 – Present

- Launched a responsive portfolio website, increasing mobile traffic by 28% through optimized design and user experience
- Established a performance monitoring system, tracking page load speeds and bounce rates, ensuring optimal site performance over time
- Added analytics tracking to monitor user behavior and identify key interaction points, allowing for continuous improvements

File Organizer [[GitHub Repository](#)]

April 2024 – May 2024

- Formulated an application to sort files into predefined and user-defined categories, organizing over 500 files in under 2 minutes
- Implemented a Tkinter-based GUI, boosting user satisfaction by 23%, measured by feedback from 8 test users
- Introduced a summary report feature that organized files in a user-friendly format, reducing file retrieval time by 11% for all users

Resume Parsing Script [[GitHub Repository](#)]

October 2023 – December 2023

- Constructed an end-to-end resume processing pipeline using spaCy, Transformers, and PDFPlumber, automating extraction of 15+ data fields (name, contact info, skills, education, experience) with 87% accuracy across 50+ resumes
- Refined a semantic ranking system using Sentence-BERT and cosine similarity to match applicant skills with job descriptions, improving candidate shortlisting efficiency by 32%
- Pioneered an intelligent error-handling system that proactively detects unprocessable resumes and applies fallbacks to recover missing data

WORK EXPERIENCE

Frame Maker

Masterbrand, Sioux Falls, SD

May 2024 – August 2024

- Fabricated and assembled frames with precision, maintaining an excellent accuracy to meet high-quality standards
- Operated and maintained machinery and tools, increasing production efficiency within 3 months
- Collaborated with team members, consistently meeting production goals and deadlines, contributing to a 13% increase in overall output

Inventory Associate

Walmart, Sioux Falls, SD

February 2021 – April 2022

- Stocked shelves and maintained inventory levels, ensuring consistent product availability for customers
- Guided customers in locating items, improving satisfaction by enhancing the shopping experience through personalized guidance
- Collaborated with the team to manage stock and organize store displays, increasing store efficiency and reducing restocking time overall

CERTIFICATIONS

Deep Learning Specialization

Expected Completion: March 2025

Coursera (Andrew Ng)

- Training deep neural networks and applying them to real-world problems in computer vision and NLP
- Mastering key techniques such as CNNs, RNNs, and GANs for advanced deep learning applications
- Implementing deep learning models with TensorFlow and Keras, focusing on optimization for accuracy and efficiency
- Developing end-to-end deep learning workflows, from data preprocessing and model training to evaluation and hyperparameter tuning

Walmart USA Advanced Software Engineering Virtual Experience Program on Forage

June 2024

- Completed the Advanced Software Engineering Job Simulation where I solved difficult technical projects for a variety of teams at Walmart
- Innovated a novel version of a heap data structure for Walmart's shipping department, showcasing strong algorithmic skills
- Crafted a UML class diagram for a data processor, considering different operating modes and database connection