

TADIWANASHE NIGEL NYAMAPFENE

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EDUCATION

Rust College

Bachelor of Science in Computer Science: 4.0GPA

Holly Springs, MS

Expected December 2026

Relevant Coursework: Machine Learning and Data Science, Programming with Python, C++ Programming, Data Structures and Algorithms, Discrete Mathematics, Calculus I & II, Linear Algebra

SKILLS

Languages: Python, JavaScript, C++ | Django, Next.js, React, HTML, CSS

Technologies/Methodologies: TensorFlow, CNN, scikit-learn| Git/GitHub| Pandas, Matplotlib, Seaborn, NumPy| Firebase, SQL

EXPERIENCE

Tufts University

Machine Learning Research Assistant

Medford, MA

June 2024- August 2024

- Developed an image classification model using TensorFlow and CNN to distinguish between aircraft variants and achieved an accuracy of **80.14%** on a dataset of 10,000 images of aircraft.
- Performed comparative analysis between Traditional Machine Learning and Optimal transport, demonstrating that Traditional Machine Learning achieved greater accuracy and less time for model training and testing for this task.
- Gained data analysis and visualization skills by plotting training and validation loss during training and testing, effectively measuring and evaluating the model's performance.

Headstarter AI

Software Engineering Fellowship

Remote

July 2024-Current

- Developed AI-powered applications including flashcards for personalized learning, enhancing user knowledge through adaptive content delivery.

Rust College

Math and Computer Science Tutor

Holly Springs, MS

Aug 2023-April 2024

- Conducted personalized tutoring sessions in Math and Physics, helping more than 25 students improve their grades by an average of 20%.
- Developed and implemented tailored study plans for students across 3 subjects, resulting in average grade improvement on final examinations.

Codepath

Fellow

Remote

June 2024-August 2024

- Completed 20 challenging coding exercises in Codepath's Technical Interview Prep Course, mastering advanced data structures and algorithms and improving problem-solving speed by 40%.
- Engaged in 10 weeks of intensive training in Data Structures and Algorithms, guided by industry professionals.

PROJECTS

Smart Pantry| <https://thesmartpantry.vercel.app/>

May 2024-June 2024

- Engineered a full-stack smart pantry application using React, Next.js, Material UI, and Firebase, to enable users seamless grocery management with real-time updates.
- Leveraged OpenAI API to implement a recipe suggestion feature based on available selected ingredients.

Aircraft Image Classification Model

June 2024-July 2024

- Developed an Image Classification model using TensorFlow to distinguish between 100 aircraft variants and achieved **80.14%** accuracy on 10,000 images of aircraft.
- Optimized the Convolutional Neural Network by adding BatchNormalization and Dropout layers, significantly enhancing feature extraction and boosting accuracy from **52.20%** to **80.14%**.

RemoTutor Chatbot

April 2024-May 2024

- Engineered a real-time tutoring chatbot using Django, AJAX(JavaScript), and HTML/CSS, enhancing tutoring efficiency for students who prefer virtual learning environments.
- Designed an intuitive user interface with easy login increasing user satisfaction for remote sessions.

LEADERSHIP AND INVOLVEMENTS

- Elected Student Government Association (SGA)-Junior Class Vice-President for the 2024-2025 academic year.
- Student Lead for Public Interest Technology University Network Rust College chapter <https://techfc.org/student-clubs>
- Served as President of the Rust College Math and Computer Science Club (2023-2024).