RÉSUMÉ

# David Nosiri

AI/ML student & developer

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## SUMMARY

AI/ML student with hands-on research experience in deep learning, multimodal data pipelines, and hardware–software integration. Skilled across the full stack (Python, Java, C#, React) with direct experience building and validating deep learning models on real-world medical data. Seeking an internship or entry-level role applying AI/ML to impactful, real-world problems.

## EXPERIENCE

### Summer Research Intern at Morgan State University

May 2025 – Jul 2025

EcgNet: A Hybrid Multimodal Deep Learning Approach for Cardiovascular Disease (CVD) Diagnosis.

- Built the image preprocessing pipeline in Python (cropping, Gaussian and wavelet denoising, bandpass filtering) for 800 scanned 12-lead ECG images across four heart conditions.
- Helped train and compare 1D-CNN, 1D-CNN + Transformer and 2D-CNN models in TensorFlow; weighted late fusion of the 1D and 2D models reached 93–96% accuracy (macro F1 0.91–0.96) across two runs on a 160-image test set.
- Produced technical reports and presentations to communicate findings to a multidisciplinary research team.
- Later audited the project code and documented six evaluation issues, including test-set reuse and mislabelled classes, along with fixes.

Python TensorFlow

### Rocketry Project Intern at Morgan State University

Jun 2024 – Aug 2024

- Worked on a professor-led student team on one part of a rocket: the hydroproofing process that checks a propellant tank holds pressure without leaking.
- Used 3D CAD software to draw and design a metal pipe plan for the test setup, and helped test the process.

3D CAD

### Project Mentor, SeaPerch at RoboNation

Oct 2023 – Nov 2023

- Trained in building underwater robots — PVC frames, circuit boards and tethers — then led high school students step by step through building their own.
- Provided hands-on guidance and troubleshooting, helping students identify and resolve construction challenges.
- Cultivated an inclusive, engaging learning environment that built student excitement for robotics.

Robotics Electronics

## ACCOMPLISHMENTS

RESEARCH · 2025

### EcgNet: deep learning on 12-lead ECG images

Built the preprocessing pipeline for a team study classifying four heart conditions from ECG images. The fused 1D + 2D model reached 93–96% test accuracy across two runs. I later audited the evaluation and documented its weaknesses and fixes.

AWARD · 2024

### Dean's List

Community College of Baltimore County, Fall 2024.

MENTORSHIP · 2023

### SeaPerch robotics mentor

Led high school students through building their own underwater robots with RoboNation's SeaPerch programme.

## SKILLS

### AI / ML

PyTorch · TensorFlow · scikit-learn · Data preprocessing · Feature engineering · Model training & evaluation

### Programming

Python · Java · C# · JavaScript · React · HTML & CSS

### Tools & platforms

Linux / Ubuntu · Windows · macOS · AWS · VMware · OnShape · Microsoft Office

### Working with people

Communication · Problem solving · Innovation · Adaptability · Mentoring

## EDUCATION

**Bachelor of Science, Artificial Intelligence** — Aug 2026 – May 2028 (expected)
Morgan State University, Baltimore, MD

**Associate of Science, Computer Science** — 2023 – 2025
Community College of Baltimore County, Baltimore, MD
Dean's List, Fall 2024