Cole James Barbes

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OVERVIEW

Former mechanic with a passion for problem-solving and building systems, which led me to pursue a degree in computer science. My experience with hands-on work and technical systems sparked a love for programming and development. Eager to leverage my diverse background and continuous learning mindset to contribute to innovative projects in software development and technology.

EXPERIENCE

Student Tutor — February 2023 – December 2024
Salisbury University — *Salisbury, MD*
- Assisted students in developing critical mathematical problem-solving skills and fostering analytical thinking
- Guided students in effectively utilizing resources to complete their assignments
- Provided computer science support, including algorithm design, debugging, and general technical assistance

Assistant System Administrator — May 2023 – August 2023
Salisbury University — *Salisbury, MD*
- Supported the system administrator in establishing the High-Performance Computing lab
- Designed layout for 34 workstations to enhance network integration.
- Contributed to the setup of a dual-boot Windows/Linux computer lab, handling machine boot configurations and network setup

Researcher at Salisbury University — May 2024 – August 2024
Salisbury University - NSF Funded — *Salisbury, MD*
- Implemented Deep Learning using TensorFlow to detect flooding from UAVSAR Imagery from Hurricane Florence
- Evaluated NASA JPL datasets to select optimal sources and processing techniques for training imagery

Research Classification Engine — February 2024 – December 2024
Salisbury University — *Salisbury, MD*
- Collaborated with a teammate to categorize academic abstracts by chaining LLM responses via LangChain for precise topic categorization.
- Developed an automated system to collect and process institution based academic data from the CrossRef API

EDUCATION

Overall GPA: 3.89

Salisbury University — Salisbury, MD
Bachelor of Science in Computer Science: Artificial Intelligence — *Feb. 2022 – December 2024*

RELEVANT COURSES

Machine Learning, Operating Systems, System Software, Data structures and Algorithms, Theory of Computation, Calculus I-II, Discrete Mathematics, Linear Algebra, Cryptography, Database Design and Implementation

SKILLS

Languages: C/C++, Python, Java, R, JS, HTML/CSS, bash

Technologies: Vim, Git/GitHub, Linux, Langchain, Next.js, MongoDB, MySQL, AWS, OpenMP, OpenMPI

CLUBS

Cyber Security Club | *President* — February 2023 – December 2024
- Maintained a pen-testing lab using Proxmox Virtualization software to deploy intentionally vulnerable VM's
- Learned the fundamental tools to gather information on networks and used various software tools to exploit vulnerabilities in a safe environment

SU Vex Robotics Club | *Team Member* — August 2022 – August 2023
- Supported the team at 2023 Vex Robotics World Championship
- Helped the team build, code, and test each robots functionality
- Led various community events to raise student involvement in robotics