Darsh Patel

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EDUCATION

B.S in Computer Science, *Track: AI & Machine Learning* Expected: May 2026

University of Maryland - Baltimore County

Related Coursework:

Software Engineering I, Operating Systems, Data Structures, Artificial Intelligence, Computer Architecture, Computer Organization, Statistics

Extracurriculars/Honors:

-Appointed as incoming GDG Lead for Fall 2025 and Spring 2026, fostering collaboration among over 100+ members to promote skill development and knowledge sharing within UMBC's tech community.

-Attained President's List distinction for Spring 2025, demonstrating academic dedication in achieving a gpa of 4.0

SKILLS

Languages: Python, C, Java, C++, SQL, JavaScript, TypeScript, HTML, CSS

Frameworks/Libraries: React, Next.js, Node.js, Tailwind, Supabase, NumPy, OpenCV, TensorFlow, Plotly, Flask, React-Native

Tools: postgresSQL, Microsoft SQL Server, AWS, Git, Jira, Confluence

Certifications: AWS Certified Cloud Practitioner, Cisco Cybersecurity Essentials

EXPERIENCE

Software Engineer *– bwtech@UMBC* December 2024 - Present

- Collaborating with Chris White under Nexsys DBA to build AI solutions that automate workflows & optimize business processes.
- Utilizing AWS Cloud to establish secure user groups and admin roles for multiple team members while building scalable infrastructure to host Product and Service landing zones for Nexsys DBA.
- Developing a cloud-based, AI-driven web application for BISYN LLC using AWS ECS, Lambda, RDS, and S3 to automate Raman spectroscopy data processing, classification, and spectral binning for remote sensing.

React • Tailwind • AWS ECS • AWS Lambda • AWS RDS • AWS S3 • GitHub • Python • JavaScript • Confluence • Jira

Technical Team Lead *– hackUMBC* March 2024 - Present

- Aided fellow organizers in hosting a 24-hour collegiate hackathon with over 440 participants by managing technical team to develop and update hackathon website and app, that both participants and organizers used throughout the event.
- Spearheaded a technical team of 6 to migrate hackUMBC.tech to Next.js, reworking the front-end with React, JavaScript, and Tailwind while configuring an AWS backend to improve data management and support secure, scalable operations.
- Streamlined participant data collection by integrating a registration form using AWS tools, which ensured scalability and reliable service for 440+ contestants.

React • Next.js • Python • JavaScript • Tailwind • AWS • Lambda • DynamoDB • S3 • GitHub • Google Apps Scripts • Project Management

Undergraduate Researcher *– UMBC DAMS Research Group* September 2024 – December 2024

- Composed over 20+ Python scripts for advanced prompt engineering, analyzing and summarizing thousands of privacy policies to evaluate the processing capabilities of large language models within the GenAIPABench project.
- Designed and deployed a React-based website with a Firebase backend to store, categorize, and enable efficient search functionality for over 1000+ privacy policies, creating an interactive platform for presenting project findings.

React • Next.js • JavaScript • Python • Firebase

PROJECTS

hackUMBC Website August 2024 - Present

- Architected a responsive front-end for hackUMBC.tech using React, Next.js, CSS, and Tailwind, to ensure a seamless experience across devices, resulted in positive feedback from 90% of users for its intuitive design and smooth transitions.
- Constructed a robust AWS backend for participant registration using DynamoDB and S3, securely storing user information and providing reliable access to resumes and registration details from over 790 participants.

CMSC 447 Retriever Essentials Inventory Manager February 2025 - May 2025

- Developed a full-stack inventory & checkout system using JavaScript, Next.js, Express, and Supabase; improved item lookup and checkout speed by 90% with barcode/QR workflows and optimized queries.
- Implemented Clerk auth with GitHub login and Docker dev setup; managed team workflow via Jira and GitHub for seamless CI/CD and contributor onboarding.

American Sign Language Image Recognition Program July 2023 - August 2023

- Engineered an AI and ML-powered American Sign Language (ASL) recognition system, trained using python, enhancing accuracy by 90%.
- Leveraged machine learning algorithms and key libraries, including OpenCV and TensorFlow, to optimize image processing and hand signal detection by 50%.
- Implemented an HTML/CSS landing page to create a user-friendly interface, which boosted user retention and engagement by 20%.