Mehad Abdi

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Education

Virginia Tech — Blacksburg, VA
B.S. in Computer Science — 49 transfer credits (AP + NOVA dual enrollment) — *Expected May 2029*
- **Coursework (in progress):** Data Structures & Software Design (CS 2114), Discrete Math (MATH 2534)

Carter G. Woodson High School — Fairfax County, VA
GPA: 4.2 — *June 2026*

Projects

CampusCals | *Python, TypeScript, React, SQL, Databricks, Supabase* — September 2026
- **2nd Place, Deloitte × Databricks Track, VTHacks 14.** Co-built a full-stack meal recommendation app that ranks live Virginia Tech dining menus against each student's calorie and protein targets, allergies, and class schedule; deployed at campus-cals.vercel.app
- Designed the AI coach so a deterministic SQL ranking picks meals and a Databricks-hosted Llama 3.3 70B only explains them, validating every response against on-screen items with a safe template fallback that blocks hallucinated menu items and health claims
- Implemented a haversine-based walking-time model across 8 dining halls and 9 academic buildings, limiting rankings and coach answers to halls a student can reach before their next class; covered by automated tests

NBA Shot Chart Web App | *Python, Flask, pandas, scikit-learn, Plotly, JavaScript* — Spring 2026
- **Senior CS Capstone (team of 3).** Built the Flask backend that pulls live roster, game, and shot-location data from the NBA stats API, with client-side caching and spaced requests to stay under its rate limit
- Added a shot-stats panel (FG%, 3P%, eFG%, zone splits), k-means hot zones outlined with convex hulls and shaded by FG%, a side-by-side game compare mode, and a logistic-regression expected-points (xPTS) model trained on the league's top 40 scorers

Experience

Machine Learning Researcher — Winter 2025
Algoverse AI Research
- Contributed to EnDive, a benchmark evaluating LLM fairness across underrepresented English dialects, accepted to EMNLP Findings 2025
- Ran model evaluations using few-shot prompting and BLEU scoring, debugged evaluation code, and analyzed outputs to identify where performance dropped across dialect groups
- Conducted a literature review of prior research on dialect bias in language models to inform the team's evaluation approach
- Conducted AI/ML research under mentorship from UC Berkeley affiliates

Teaching Assistant — AP Computer Science A — Fall 2024 – May 2026
Carter G. Woodson High School — *Fairfax County, VA*
- Supported 70+ students across 3 classes in Java programming and lab debugging; delivered lessons during instructor absence
- Provided 1-on-1 tutoring in object-oriented programming and created supplemental study materials

Kids Supervisor (Promoted) — Summer 2024 – August 2026
Life Time Fitness — *Fairfax, VA*
- Managed daily operations for 30-40 children in a structured, safety-focused environment
- Trained new staff and coordinated activities to ensure high-quality supervision

Leadership

Regional Coordinator — Technology Youth Empowerment (TYE) — Spring 2025 – Present
Fairfax County, VA
- Interview, onboard, and manage a team of 6 instructors and outreach coordinators across multi-site STEM programming
- Organize STEM workshops serving up to 90 students, coordinating logistics across 10+ elementary schools and libraries

Vice President — Computer Science Honor Society — Summer 2025 – June 2026
Carter G. Woodson High School — *Fairfax County, VA*
- Founded and led a CS Task Force that developed peer-created study materials for members
- Organized tutoring events and coding workshops across 3 elementary schools serving 80+ students

Technical Skills

Programming: Python, Java, TypeScript, JavaScript, SQL, MATLAB
Web: HTML, CSS
Frameworks & Tools: React, Flask, Plotly, Databricks, Supabase (PostgreSQL), Git, GitHub
Concepts: Data Structures, Object-Oriented Programming, Machine Learning Evaluation
Certifications: IT Specialist — Java (Certiport)