MARKOSE TSEGAYE

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EDUCATION

George Mason University   Fairfax, VA
*B.S. in Computer Science (Accelerated M.S. Track) — **GPA: 3.69***   *August 2024 – December 2027*
  – Admitted to **BAM Program** for early M.S. in Computer Science coursework
  – Relevant Coursework: **Data Structures & Algorithms, Object-Oriented Programming, Software Engineering, Systems Programming**

Northern Virginia Community College (NOVA)   Springfield, VA
*A.S. in Computer Science — **GPA: 3.5***   *August 2022 – May 2024*

PROJECTS

Forkcast | *FastAPI, Express, Supabase, React, XGBoost*   January 2025 – Present
  – Worked in a **7-member team** to develop an AI-powered platform for forecasting ingredient usage based on historical POS data
  – Built backend APIs with **Express** and integrated **Clerk** (auth) and **Supabase** (storage) into backend
  – Implemented **ML forecasting pipelines** using **XGBoost** and **FastAPI** improving demand prediction accuracy
  – Developed a responsive dashboard with **React** to visualize real-time forecasts and inventory status

AlgoMinds | *Next.js, Express, PostgreSQL, Prisma, Redis, WebSockets, Judge0*   March 2025 – April 2025
  – Built a full-stack **real-time coding platform** focused on **DSA problem-solving**, featuring **1v1 algorithm battles** with live score tracking
  – Implemented a complete **auth system** using **JWTs** with role-based access control for secure matchmaking and submissions
  – Integrated the **Judge0 API** to support multi-language code execution with real-time verdicts
  – Deployed an in-app **AI assistant** for hint generation, targeting beginner to intermediate users
  – Used **Redis caching** to reduce backend response times by **30%** during match sessions

EXPERIENCE

Local Waste Management Client – "Dumpster Masters"   March 2025 – Present
Freelance Software Engineer   *Fairfax, VA*
  – Developed a **React Native** mobile MVP with an **Express.js** backend for job dispatch, driver workflows, and in-app photo uploads
  – Built interactive **map screens using Mapbox** to display real-time pickup/drop-off locations and optimize driver sequences
  – Engineered a role-based **REST API** (auth, jobs, billing) using **Express.js**, **PostgreSQL**, and **Prisma ORM**
  – Integrated **Clerk Auth** for authentication and used **Multer** for secure media handling in photo uploads
  – Achieved functional MVP sign-off prior to project shelving due to internal client reorganization

CLUBS AND AFFILIATIONS

ColorStack – National Member   March 2025 – Present
Affinity Group for Black & Latinx CS Students   *Fairfax, VA*
Computer Science Club – Active Member   October 2024 – Present
George Mason University   *Fairfax, VA*

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML/CSS

Frameworks/Technologies: React, Next.js, Express.js, Django, Tailwind CSS, WebSockets, Prisma

Tools: Git, Figma, Cursor, Docker, Postman

Cloud / AI Services: OpenAI API (custom AI assistant), AWS, Azure Cognitive Services