Abdulrahman Elmi

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EDUCATION

University of Washington Tacoma, WA
Bachelor of Science: Computer Science and Systems March 2027
Relevant Coursework: Object Oriented Programming, Discrete Math, Machine Organization, Programming Practicum, Computer Architecture, Data Structures & Algorithms, Advanced Algorithms, Database System Design(SQL, Google Cloud Platform)

SKILLS

Programming Languages: Java, JavaScript, TypeScript, Python
Tools and Technologies: VS Code, IntelliJ, Git, Github, HTML, CSS, Bootstrap, React, Node.js, Next.js, Docker, SQL, Firebase
Soft Skills: Adaptability, Communication, Team Work, Problem-Solving, Fast-Learner, Critical Thinking, Leadership

PROFESSIONAL EXPERIENCE

Tech Tykes | *Software Engineering Intern* | **Game Genie** **Math Match** Summer 2025

- **Built and deployed** *Game Genie*, an **AI**-powered adaptive word puzzle game using React, Tailwind, Node.js, Firebase, and OpenAI GPT, **boosting engagement for 4th–8th graders by delivering personalized vocabulary practice with real-time hints, definitions, and quizzes.**
- Implemented adaptive gameplay mechanics with **OpenAI and Firebase Firestore** to dynamically adjust word difficulty**,** topics, and feedback based on player accuracy, time, and streaks, **increasing retention and learning depth across sessions.**
- Engineered a secure custom OpenAI wrapper with guardrails and brand-aligned logic, **ensuring all AI-generated hints, examples, and challenges remained age-appropriate, playful, and educational,** strengthening parent and teacher trust.
- Reduced gameplay bugs by 60% by replacing fragile hardcoded logic with robust **backend APIs and end-to-end** session handling for scoring and progress tracking, **delivering smoother and more reliable game sessions**
- **Built and deployed Math Match,** an adaptive game where players pair numbers using math operations to reach OpenAI-generated targets, with difficulty and operations adjusting by level and player performance **— boosting math mastery for 4th–8th graders by 30%.**
- Integrated **OpenAI API** to generate solvable grids and child-friendly feedback**, reducing error frustration by 20% and** raising session engagement by 15% across difficulty modes.
- **Collaborated with a Figma designer** to deliver accessible, child-friendly UIs, **i**mproving usability and aligning gameplay with learning goals while balancing performance with UX.
- Streamlined deployment by setting up GitHub Actions CI/CD and deploying to GitHub Pages & Render, **reducing manual release time by 80% and ensuring consistent multi-environment delivery.**

TechStartupClub | *Full-Stack **Lead** Developer* | University of Washington | **UMarket** February 2025-Present

- Improved student access to affordable goods by leading development of Umarket, a peer-to-peer item exchange platform using **React**, **TypeScript**, and **PostgreSQL**
- Decreased deployment errors by **50%** by containerizing backend with **Docker** and maintaining scalable **REST APIs**
- **Led** sprint planning and peer mentorship, guiding 3 developers on **Git** workflows, code reviews, and TypeScript best practices

Computing for All | *Software Engineering Intern* | *Sponsored by Bank of America* | **Project** June 2024-September 2024

- Designed and built the **frontend for two core pages** of a volunteer management portal using **JavaScript React, CSS, and Figma**, improving usability and mobile responsiveness for 100+ active users.
- Developed **backend APIs with Node.js**, Express, and MongoDB, enabling secure **end-to-end** data storage and retrieval for volunteers and organizations.
- Implemented **JWT authentication** to ensure account security and meet basic **compliance standards** for data handling.
- Used **Git/GitHub version control** to collaborate with other developers, reducing code conflicts
- Collaborated in Agile sprints, applying strong **communication skills** to align backend progress with non-technical stakeholders.

KeelWorks Foundation | *Software Engineering Intern* | Remote March 2024-June 2024

- Automated manual workflows by building **an end-to-end JavaScript Next.js** task tracker with integrated logging APIs, saving 4+ hours/week in manual reporting
- Increased the KeelWorks official website engagement by **20%** by improving frontend interactivity using **HTML, CSS,** and accessibility with modern **JavaScript** practices