

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

PROJECTS

<https://abdulrahmanelmi.com/project/edge-incident-drill> | *EdgeIncidentDrill*

September 2025

- **Built an end-to-end cybersecurity training simulator with React, TypeScript, and Tailwind CSS** that taught users to handle malware, phishing, and data breach scenarios, resulting in a more engaging way to learn incident response.
- **Developed an AI-powered chat interface with text, voice, and multiple-choice input** that guided users step-by-step through incidents, improving accessibility and hands-on learning compared to static training.
- Implemented progress tracking and dashboards using Zustand state management and browser storage, enabling users to monitor completion rates, training history, and skill improvement over time.
- **Integrated Cloudflare Workers and Pages configuration to support scalable deployment at the edge**, laying groundwork for global availability and low-latency training sessions.
- **Delivered a responsive, multi-device design that allowed both first responders and civilians** to practice scenarios on desktop and mobile, increasing usability in real-world contexts.

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.
- **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, improving 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.**

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

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