

Abdulrahman Elmi

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EDUCATION

University of Washington

Bachelor of Science: Computer Science and Systems

Tacoma, WA

June 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://abdulrahmaelmi.com/project/edge-incident-drill> | EdgeIncidentDrill

August 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.
- Integrated **Cloudflare Workers** and Pages configuration to support scalable deployment at the edge, laying groundwork for global availability and low-latency training sessions.

PROFESSIONAL EXPERIENCE

Tech Tykes | Software Engineering Intern | [Game Genie](#) [Math Match](#)

June 2025-September 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.
- Reduced gameplay bugs 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**
- **Applied data structures and algorithmic trade-offs** to optimize adaptive difficulty scaling, balancing speed and complexity for dynamic gameplay experiences.
- **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 and** raising session engagement by 15% across difficulty modes.
- **Collaborated with a Figma designer** in **Agile** sprints to deliver accessible, child-friendly UIs, **improving frontend** look and aligning gameplay with learning goals while balancing performance with UX.

TechStartupClub | Full-Stack Lead Developer | University of Washington | [UMarket](#)

February 2025-Present

- **Led** the design and development of a scalable peer-to-peer marketplace using React, TypeScript, **PostgreSQL**, and Dockerized services, aligning with **cloud-native principles**
- Practiced **Ownership and Mentorship** by guiding 3 developers through Git workflows, code reviews, and best practices in **TypeScript** and API design.

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 NextJS 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