

Antonia Mugisa

902-237-0744 | antoniamugisa@gmail.com | [LinkedIn](#) | [Github](#) | [Website](#)

EDUCATION

Dalhousie University

Bachelor of Computer Science

Halifax, NS

January 2020 - August 2025

- **Relevant Coursework:** Mobile Computing, Operating Systems, Programming Languages, Usable Security & Privacy, Software Engineering, Theory of Computer Science, Algorithms
- **Organizations & Clubs:** Women in Technology Society member, Computer Science Society member, Her Campus Dalhousie social media manager, ColorStack Organization Member

EXPERIENCE

Avanade

Software Engineer Intern

Halifax, NS

May 2024 - August 2024

- Investigated the development of a Retrieval-Augmented Generation (RAG) pipeline by integrating Azure Cognitive Search with OpenAI's large language models to retrieve and generate accurate responses from complex datasets, achieving over 90% answer precision in test scenarios.
- Designed and developed a lease document reader leveraging Azure's AI services, including Azure Form Recognizer and Azure Cognitive Search, enabling efficient indexing and querying of information, reducing search time from minutes to under 10 seconds.
- Conducted research and analysis on OpenAI's LLM capabilities, optimizing embedding models and contributing insights to enhance the performance of the Retrieval-Augmented Generation pipeline leading to improved QA outcomes with up to 95% accuracy in benchmark tests.
- Provided technical support to internal teams by logging, tracking and documenting cloud architecture and deployment procedures, sharing insights to improve future AI model integration and optimization.

Avanade

Software Engineer Intern

Halifax, NS

May 2023 - August 2023

- Collaborated with cross-functional teams to migrate the firm's legacy services from on-premises to Azure, optimizing architecture for cloud-native performance and resilience.
- Implemented and managed Azure services, compute (VMs and App Services), storage, and networking, enabling scalable support for the client's large-scale legal document processing workloads.
- Automated deployment processes using PowerShell, Kubernetes, Docker, and Terraform, ensuring continuous integration and deployment (CI/CD) pipelines for cloud infrastructure.
- Contributed to the implementation of security measures such as identity and access management (IAM), ensuring compliance with security standards and conducting risk assessments.
- Developed orchestration scripts and workflows for managing dependencies across distributed Azure resources, improving cloud response times and reducing manual intervention in deployment cycles.

PROJECTS

Emotify | [Github](#) | [Hackathon](#)

ReactJS, NextJS, Firebase Database, Gemini-AI

- Built an AI-powered calendar extension with Gemini AI and Firebase that allows users to log moods and receive personalized check-ins and playlist recommendations, tailored for student and professional wellbeing.
- Designed a scalable backend with RESTful APIs, separating mood tracking and playlist services into modular routes and enabling easy integration with third-party calendar platforms.
- Implemented role-based authentication using Express.js, MongoDB, and JWT, securing access to admin and user dashboards with token expiration and refresh token logic.

Personal Website/Portfolio | [Github](#)

HTML, CSS, ReactJS, JavaScript

- Developed a responsive, single-page portfolio with dynamic content and form validation, showcasing projects and contact features.
- Applied UI/UX best practices such as layout structuring, animation timing, and visual hierarchy to improve engagement and user flow.

TECHNICAL SKILLS

- **Languages:** Python, Java, C/C++, JavaScript (ES6+), TypeScript, HTML, CSS, SQL, Swift, Terraform, Bash
- **Frameworks & Tools:** ReactJS, Node.js, Express.js, Next.js, Tailwind CSS, Bootstrap, Redux, Jest, JUnit
- **Databases:** MongoDB, MySQL, PostgreSQL, Firebase Realtime DB, Firestore
- **DevOps & Infrastructure:** Docker, CI/CD pipelines, REST APIs, GraphQL, Terraform, Linux CLI
- **Other Skills:** Agile/Scrum, Object-Oriented Programming, Debugging, Unit Testing, Cross-platform Development

CERTIFICATIONS

Microsoft Certified:

Credential ID

- Azure Fundamentals: AZ-900 69A9537704D42A35
- Azure Data Fundamentals: DP-900 610B490EF0A85DCF
- Azure Artificial Intelligence Fundamentals: AI-900 9C593A31AF418570
- Azure AI Engineer Associate: AI-102 85681882AC1EBD15