

Tasfia Khan Aohana

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Education

Computer Engineering Technology – Computing Science

Sep 2022 – Aug 2024

3- Year Advanced Diploma | Algonquin College of Applied Arts and Technology, Ottawa, CA

Dean's Honours List | GPA: 3.77/4.00

Relevant Coursework

- Object-Oriented Programming, Data Structures & Algorithms, AI-Integration, Application Programming
- Business Intelligence and Data Analytics, Database Systems, Big Data Concepts, Data Visualization
- Processor Architecture, Compilers, Interfacing, Real-Time Programming
- Networking Fundamentals, Operating Systems, Scripting

Technical Skills

Languages: Java, C, C++, C#, SQL, HTML, CSS, JavaScript, PHP, R, Bash/Shell

Database: MySQL, MongoDB

Frameworks/Libraries: React, Node.js, Figma, AWS, Microsoft Azure

Developer Tools: Git/GitHub, VS Code, Linux / Ubuntu, Postman

Data Analytical Tools: Excel, Power BI, Weka, RapidMiner

Core Technical Skills: Object-Oriented Programming (OOP), REST API, Version Control, Debugging, Agile / Scrum fundamentals, Unit Testing, Artificial Intelligence Integration

Experience

SocioLingo Co-Founder - AI-Powered Language Learning Application

Applied Research Project | Entrepreneurship Initiative | Algonquin College

Technologies: Flutter | Firebase | Node.js | Python | ChatGPT

- Co-founded and contributed to the development of an **AI-powered language learning application**, integrating **ChatGPT** to enhance user interaction and personalized learning experiences
- Led **QA testing efforts**, including planning and executing **alpha and beta testing**, identifying bugs, and improving usability
- Developed **automated test scripts using Selenium**, increasing testing efficiency and coverage
- Collaborated with a cross-functional team to troubleshoot issues and ensure application stability
- Authored and contributed to a **comprehensive technical report**, documenting system functionality, testing processes, and outcomes
- Leveraged multilingual proficiency (**English, Arabic, Bengali, Hindi, Korean**) to support testing and design of a language-focused platform

Projects

Equipment Test Job Manager — ASP.NET Core Web API

Technologies: C# | ASP.NET Core Web API | Entity Framework Core | SQLite | Swagger

- Developed a **C#.NET application to simulate equipment test workflow management**, including job creation, status tracking, and structured system processes

- Designed **and implemented RESTful APIs using ASP.NET Core** and Entity Framework Core with SQLite persistence
- Applied **object-oriented design principles** to structure models and workflows for maintainability and scalability
- Implemented **validation and logging to support debugging** and ensure reliable system behavior
- Designed system workflows with a **user-focused approach**, improving clarity and usability of test data management
- **Tested and validated API functionality** using Swagger to ensure accurate request handling and response behavior

Game of Life Simulation — Java (Swing, MVC Architecture)

Technologies: Java | Java Swing

- Developed an interactive implementation of **Conway’s Game of Life** using **Java** and the **Swing GUI framework**
- Designed and implemented the application using the **Model-View-Controller (MVC) architecture**, ensuring separation of concerns and maintainable code structure
- Built a responsive user interface with real-time grid updates and user controls for simulation input and execution
- Implemented core game logic algorithms to efficiently handle cell state transitions and grid evolution
- Focused on **object-oriented design principles**, improving code scalability and readability

Real-Time Door Entry System — Embedded C (QNX Neutrino, State Machine Architecture)

Technologies: Embedded C | State Machine | QNX Neutrino | Momentics IDE

- Developed a **real-time door entry system** using **Embedded C** on **QNX Neutrino RTOS**, handling identification, temperature screening, and guard interaction workflows
- Designed and implemented a **state machine architecture** to manage system states and transitions reliably
- Utilized **inter-process communication (IPC) via message passing** for efficient and deterministic real-time performance
- Integrated multiple system components to ensure accurate input handling and responsive system behavior
- Built and tested the application using **QNX Momentics IDE**, focusing on reliability and real-time constraints

Certifications/ Extra-Curricular Achievements

Student Leadership Certificate – Algonquin College, Ottawa, ON

- Awarded for strong leadership and active community volunteering

Core Strengths/ Soft Skills

- Strong **written and verbal communication** skills with advanced English proficiency (*IELTS: 8.0/9.0*)
- **Multilingual communication:** Fluent in English, Arabic, Bengali, Hindi, and Korean; actively learning French
- Effective at translating **technical concepts for non-technical audiences**
- Strong **problem-solving and analytical thinking** in technical and team environments
- Proven ability to **adapt quickly** and learn new tools, technologies, and domains
- Solid **time management and organization**, able to prioritize tasks and meet deadlines in fast-paced settings

References - Available upon request
