Christine Abdelmesih

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https://abdelmesihchristine.github.io/Resume/

HIGHLIGHTS OF QUALIFICATIONS

- **Hands-on in Backend and Full-Stack Development:** Developed skills in Java, TypeScript, REST APIs, Docker, K9s, and AWS during a co-op at Ciena, contributing to cloud-based feature development and maintaining multi-repository dependencies.
- **Proficient in Source Control and Collaboration Tools:** Applied Git, Bitbucket, and Jira to manage feature requests, resolve bugs, and track progress; participated in peer code reviews and used GitHub Copilot AI to improve productivity.
- **Experienced in Frontend Development:** Built and refined user interfaces with JavaScript, HTML, CSS, and Ember.js, improving usability and ensuring consistent, responsive design across applications.
- **Skilled in C++ and Object-Oriented Programming:** Completed advanced C++ coursework (building on an A in C), applying object-oriented principles, efficient data structures, and optimized coding practices.
- **Knowledgeable in Python and Java Development:** Built and maintained academic and personal projects, demonstrating a strong understanding of OOP, algorithms, and scalable solution design.
- **Strong in Problem-Solving and Debugging:** Resolved software bugs and managed dependencies across projects, ensuring efficient, reliable, and maintainable solutions.
- **Effective Team Collaborator:** Worked in Agile/Scrum environments, gathering requirements, documenting processes, and supporting cross-functional teams to meet project deadlines.

EDUCATION

Bachelor of Computer Science, AI-Machine Learning stream. **September 2023 - Present**
Carleton University, Ottawa, Ontario

- Fourth year standing, 11.10/12 (A)
- Expected Graduation Date: April 2027 with 4 terms of co-op, and 2 terms of Internship

Bachelor of Architectural Engineering **September 2009 - April 2014**
Helwan University, Cairo, Egypt

AVAILABILITY

Available for 8 months beginning in January 2025 with the school co-op program, then 8 months of Internship.

WORK EXPERIENCE

Front-End UI Developer (Co-op) **May 2025 - Present (8-month term)**
Ciena, Ottawa, ON

- Developed and deployed new software features using TypeScript, Java, Docker, and AWS, which improved performance and ensured smooth delivery of updates to cloud servers.

- Fixed frontend bugs by debugging and refining code, which improved usability, reduced errors, and ensured smoother user interactions.
- Updated dependency packages across multiple repositories in line with changelogs and repository changes, ensuring compatibility, reducing build failures, and maintaining system stability.
- Managed Jira tickets and stories to implement feature requests and resolve bugs, while collaborating in peer code reviews through Bitbucket to maintain high-quality standards.
- Adapted new feature updates to respect existing APIs, ensuring that workflows remained accurate and preventing invalid operations.
- Used Git and Bitbucket to manage source code, creating feature branches, testing changes locally, and merging updates through peer-reviewed pull requests; leveraged GitHub Copilot AI to boost productivity and ensure reliable version control.

Architectural Assistant **March 2024 - August 2024**

Archicana, Ottawa, ON

- Assisted in creating detailed architectural drawings and specifications using design software, which reduced manual workload and increased team efficiency, contributing to timely project completion.
- Prepared detailed working drawings, specifications, and design details for interior projects, ensuring alignment with project standards and contributing to accurate project execution.

APPLIED PROJECTS https://github.com/AbdelmesihChristine

Tandem Insulin Pump Simulator (C++/Qt)

- Built a full-featured simulator of a modern insulin pump, modeling real-world workflows and safety logic for insulin delivery and glucose monitoring.
- Applied OOP design patterns (Observer, Mediator, Encapsulation) and created supporting UML class, sequence, and state machine diagrams to ensure modularity, clarity, and extensibility.
- Implemented core features such as real-time CGM simulation, insulin bolus delivery, safety checks, and event history logging, resulting in a realistic and user-friendly system simulation.
- Developed interactive GUI components with Qt, including live blood glucose graphs, warning alerts, and profile management dialogs.

RideShare (C++)

- Developed an Uber-like application demonstrating multiple inheritance (Driver and Customer inheriting from a common User class and Drawable interface).
- Implemented a Visitor design pattern to display Drivers and Customers on a map, enabling multiple dispatch for efficient code organization.
- Created templated List structures (using function pointers for sorting) to manage dynamic collections of Drivers, Customers, and drawable objects.

Bank Account (Java)

- Applied Object-Oriented Programming (OOP) principles to design the Bank Account classes, ensuring modularity and scalability.
- Updated the Bank Account code to integrate Abstract Data Types (ADTs) for optimized data handling, incorporating file input/output procedures to ensure secure data management.

Enchanted Library, Text adventure game (Python)

- Designed an immersive map for player navigation within the Enchanted Library.
- Created textual data files to store game data, optimizing resource management and memory usage.
- Implemented game logic and algorithm to bring the Enchanted Library text adventure to life