

Edward He

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EDUCATION

University Of Ottawa

Ottawa, ON, Canada

Honour Bachelor of Science with Major in Computer Science and Minor in Mathematics

Sep. 2021 – Jun. 2025

- Good Academic Standing at 80 GPA
- Undertook comprehensive coursework: Algorithm Design, Software Engineering, Data Structures, Computer Architecture, Databases, User Interfaces, Discrete Structures, Statistics, and Calculus.
- Dean's Honour List: 2022 winter, 2024 winter
- Awarded \$3000 Admission Scholarship for academic excellence.
- Secured \$1000 First Year Merit Scholarship recognizing outstanding performance.
- \$1000 Eng.WivesAssociation Ottawa Bursary

EXPERIENCE

Junior Software Developer - VBA Automation Script

June 2022 – August 2022

Asiacom-Americas

Dulles, Virginia, U.S.A.

- Conceived an automation script streamlining the consolidation of weekly employee reports into a singular bi-weekly report.
- Achieved an impressive script performance of $O(n)$, drastically diminishing the HR team's workload for pay report conversion.
- Employed a modular programming approach, segmenting the script into distinct functions for maintainability.
- Enhanced code readability and simplified adaptation for developers.
- Amplified operational efficiency twofold by eliminating manual report conversion.
- Achieved a 10% cost reduction in report conversion by automating processes.

Junior Software Developer - Laptop Application

July 2023 – September 2023

Nanjing Unitech Electric Power Company

Remote Working

- Spearheaded the creation of the "UnifiedMonitor" application to fetch real-time solar panel data from manufacturers' websites.
- Utilized Selenium, Guava, and Jsoup for web automation and HTML parsing.
- Implemented a data-fetching algorithm with $O(n^2)$ complexity for optimal retrieval.
- Developed a robust wait-and-check mechanism to capture required web elements.
- Designed a user-centric interface with a visually appealing SVG illustration for real-time data representation.
- Facilitated device comparisons by consolidating information into a single dashboard.

AI Trainer

Jan 2024 – Aug 2024

Outlier AI

Remote

- Optimized AI model performance by refining response accuracy and contextual understanding.
- Developed advanced code solutions to enhance the AI's problem-solving capabilities.
- Crafted precise content to improve the AI's writing proficiency and coherence.
- Conducted comparative analysis to identify key areas for model improvement.

PROJECTS

CUDA Glow Effect | *CUDA, TensorRT, OpenCV*

2023 – Present

- Developed a high-performance image and video processing application applying dynamic glow effects.
- Leveraged CUDA Graphs to accelerate segmentation inference, significantly reducing kernel launch overhead and enabling real-time performance.
- Implemented a parallel mipmap pipeline with triple buffering and non-blocking streams, boosting processing throughput over previous versions.
- Recognized as a school honours project, showcasing advanced GPU programming and real-time computer vision techniques.

Course Booking App | *Java, SQL, AndroidStudio*

September 2022 – December 2022

- Developed a dynamic Android application with a responsive front-end and robust SQL database for scheduling and account management.
- Engineered adaptive layouts to optimize usability for various user roles.
- Incorporated comprehensive JUnit testing to ensure reliability and maintainability.

Hotel Database Management Simulation System | *Java, HTML, JSP, PostgreSQL, IntelliJ*

January 2023 – May 2023

- Orchestrated an advanced hotel management solution providing effortless administrative experience.
- Architected a resilient PostgreSQL database system with triggers, hierarchical structures, and table associations for seamless automation.
- Developed comprehensive backend utilities and responsive UI elements to facilitate real-time operations.

Stopwatch App | *React, JavaScript, CSS*

January 2024

- Designed and implemented a React-based stopwatch application with modern web development practices.
- Utilized state management and hooks in React for a responsive user interface.
- Developed comprehensive test suites using React Testing Library and Jest to ensure reliability.
- Deployed the application on Microsoft Azure.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres, MySQL), JavaScript, HTML/CSS

Frameworks: JUnit, Python Unit Test

Developer Tools: Microsoft Azure, Android Studio, jpackage, Maven, CUDA (parallel programming on GPUs), Docker

Libraries: Pandas, NumPy, Tkinter

CERTIFICATES

Microsoft Azure AZ-900