

Mike Gao

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TECHNICAL SKILLS

Languages: C/C++, Python, Java, Kotlin, JavaScript, C#, SQL, HTML/CSS

Frameworks/Tools: React, Node.js, Next.js, Git, Flask, NumPy, PyTorch, Gradle, Docker

EDUCATION

University of Waterloo

Bachelor of Computer Science

- Expected Graduation: May 2027

Waterloo, ON

Sep. 2022 – Present

EXPERIENCE

R&D Assistant Developer

Feb. 2024 – May 2024

DupliCALL Co.

Remote

- Researched, locally deployed, and extensively tested **90+** dialogue summarization LLMs using **Huggingface** and other open-source libraries.
- Developed innovative concepts to handle company requirements such as hardware optimization, multilingual translation capabilities, and integration into company call transcribers.
- Streamlined LLM testing methods through development of interactive tkinter GUI interface, improving testing efficiency by **60%**
- Presented culminative research findings via PowerPoint to a team of **10+** software engineers. Showcased GPU efficiency of summarization methods through developed interface.

Programming Instructor

Nov. 2021 – Mar. 2022

Canfly Education Canada

Remote

- Educated youth about basic programming concepts (syntax, variable manipulation, loops, etc.) using Java.
- Organized course content and curriculum with Canfly management to enrich each student's learning experience and meet Canfly's educational goals.

PROJECTS

Timestamp 🕒 | *Kotlin, Jetpack Compose, Gradle, Spring Boot, Firebase, Docker*

Sep 2024 – Dec 2024

- Spearheaded a team of 4 software developers to develop a secure time-management mobile app that organizes events, sends timely reminders, and provides real-time user location updates
- Ensured smooth communication of Frontend and Backend models using MVVM architecture and activity-scoped ViewModels
- Integrated Graphhopper's routing engine through to reduce Map routing requests from **500ms to 10ms**
- Built an intuitive frontend UI using **Material3** design to maximize user engagement, including Mapview page that leverages Google Maps API

Chess ♟️ | *C++, Git, Flask*

Jul. 2024 – Aug. 2024

- Developed C++ chess application using OOP principles, utilizing inheritance and polymorphism for player/piece type hierarchy.
- Utilized MVC and Observer design patterns for user interactions, enhancing reusability/maintainability of code.
- Designed efficient and error-free algorithms to detect complex game states (checkmates, stalemates, discovered checks, etc.)

Recursive Terrain Generator 🏔️ | *Java, Eclipse IDE*

Jan. 2022 – Feb. 2022

- Developed a rigorous program that uses recursion to generate terrain of varying detail/irregularity.
- Mathematically devised 3D projection onto a 2D plane through algebraic formulas (matrix multiplication, intercept theorem, etc.)
- Analyzed and implemented linear interpolation concepts to increase depth of terrain detail.

HONOURS & AWARDS

Best Hack: Resolutions 🏆 | *Hacks United V2*

Jan. 2024

- Implemented an Android Studio mobile app that helps users achieve quality sleep through a virtual pet.
- Included a comprehensive UI/UX setup menu to add customizability to user experience.