# Raghav Sethi

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## EDUCATION

**Bachelor of Mathematics** (Co-operative Program) | University of Waterloo          Expected June. 2022
- Majors in Combinatorics and Optimization
- Majors in Computational Mathematics
- Minors in Computer Science
- Majors in Geomatics

**Diploma in Excellence in GIS** (Geographical Information Systems) | University of Waterloo

**Leadership Certificate Program** (Credential ID C000001529) | University of Waterloo

## EXPERIENCE

**Computer Science and Mathematics Tutor**          Sept 2018 – Present
Private | Waterloo, ON
- Conducted code reviews for 10+ students per day, focusing on code correctness, efficiency, and readability.
- Curated 3+ example code in Java/Python/C++ depicting various programming concepts to improve learning.
- Managed 20+ students per week with different study schedules and learning habits.
- Assisted students in 10+ courses including compiler construction, OOP, algorithms & data structures, competitive programming, databases, linear algebra, calculus, statistics, LP optimization etc.

**Software Developer (Co-op)**          Sept – Dec 2020
Mappedin.Inc | Waterloo, ON
- Designed and developed 2+ pages every day for the company's website using Figma and implemented with React.
- Collaborated with Marketing and Sales teams to bring the latest content to the website improving SEO by 50%.
- Automated website deployment using Netlify and GitHub CI workflows.
- Created company's virtual escape room game with 10+ puzzles for social activities during work from home.

**Full Stack Web Developer (Co-op)**          Jan – Apr 2020
LumenEd.io | Kitchener, ON
- Deployed BigBlueButton on test servers (AWS, DigitalOcean) and customized the functionality using Ruby on Rails
- Optimized SQL queries to retrieve the data 80% faster in admin dashboard.
- Written python/bash scripts to generate various user statistics from server logs in csv, XML, txt formats.
- Developed a booking system (Tutor Marketplace) using WooCommerce and resizing it to company needs.
- Customised website using HTML5, CSS, SASS, JavaScript, jQuery, PHP for tutors' marketplace and tutor partners.

**Instructional Support Assistant (ISA) CS247/137/136/115 | Math 642  (Co-op)**          Sept 2018 - Dec 2019
David R. Cheriton School of Computer Science| Waterloo, ON
- Facilitated student learning and understanding (relating OOP C++/Python, Software engineering design patterns, Algorithms, Data Structures, Pointers, Memory Management etc.) during lectures & tutorials and answered any questions.
- Created testing scripts to test over 900 code submissions, marked assignments/projects and provided constructive feedback for all aspects of code correctness/quality.
- Designed new course webpage (Bootstrap, JS) for CS115/247, improving overall aesthetics and utility of webpage for students and course staff.

## PROJECTS

**Chamber Crawler 3000+ and Maze (C++, OOP)**
- Leveraged OOP concepts, design patterns (MVC, Observer, Visitor, NVI), Memory Management, Smart Pointers.
- Used Xwindow and Ncurses libraries to implement GUI and keyboard controls

**EscapedIn (React)**
- An escape room game with 10+ puzzles made during a hackathon at MappedIn for weekly organization games.
- Used React.js for creating interactive UI using Virtual DOM, JSX, styled components and React concepts.