

Kush Bhagat

Computer Science at University of Waterloo

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Education

University of Waterloo | Bachelor of Computer Science, Co-op

2018 - 2023

- **3.87/4.0 GPA**; Term Dean's Honours List (Fall 2018, Winter 2019, Spring 2020)
- **Relevant Courses**: Object-Oriented Design, Data structures and Data Management, Intro to AI with Python
- **Notable Achievements**: President's Gold Scholarship (\$20,000), Semi-finalist in New Venture Case Competition, Semi-finalist in Starbucks Case Competition

Skills

Languages: C/C++, Python, TypeScript, JavaScript, C#, XAML, Bash, SQL, Java, HTML/CSS (Sass)

Technologies: ASP.NET Core, Angular, Django, React, WPF, TensorFlow, Unity, OpenCV, Git

Work Experience

Web Developer | Equitable Life of Canada

Sept 2020 – Dec 2020

- Built an **Angular** web app to manage the connections of **10,000+** applications, servers, and environments
- Created a client-side caching service that intercepts high-usage data, reducing load to backend server by **15%**
- Used **ASP.NET Core** to build a **RESTful API** that manages CRUD requests for the app catalog database
- Streamlined the UAT environment by documenting the connections and dependencies of **100+** batch jobs

Software Developer | Rocscience

Jan 2020 – Apr 2020

- Developed a system controller within the **WPF** framework to manage **100%** of the program's UI elements
- Created application-wide themes and a dynamic theme manager to handle **3D** models, maps, and environments, while synchronously allowing creation and control of custom themes
- Conceived and built a tool in **C#** to provide instant access to app documentation, cutting search time by **99%**

Projects

Road Mixify | Angular, Node.js, Spotify API

🌐 kushbhag.github.io/RoadMixify -- 🌐/RoadMixify

- A web app allowing Spotify users to create randomized playlists based on road-trip duration and user-selected artists and albums

Connect 4 AI | JavaScript

🌐 kushbhag.github.io/Connect4Web -- 🌐/Connect4Web

- Created a search tree using a depth-limited **minimax algorithm** to parse through **16,800+** moves every turn
- Optimized search by **40%** by using transposition tables and alpha-beta pruning

WLP4 Compiler | C++, MIPS

🌐/WLP4Compiler

- Implemented scanning, parsing, context sensitive analysis, and code generation of WLP4 code (subset of C++)
- Ranked **3rd** amongst 300+ students in creating the most optimized code generating compiler

Wiki | Django

🌐/Wiki

- Designed and developed an online encyclopedia allowing users to read, create, and edit Wikipedia-like pages

Biquadris | C/C++

🌐/Biquadris

- Created a two-player Tetris game, with an emphasis on design patterns like Observer and Factory Method
- Developed various other games like Spider Solitaire, Reversi, and Hanabi using **C/C++**