

KUSH BHAGAT

Computer Scientist and Aspiring Entrepreneur

Enthusiastic, and solution-oriented software developer, with wide variety of experience in leadership positions. Practical knowledge in artificial intelligence, web development, various programming languages and video game design.

+1 (647) 674-2186 ☎

bhagat.kush.a@gmail.com ✉

github.com/kushbhagat 🐙

linkedin.com/in/kushbhagat in

WORK EXPERIENCE

Software Developer

Rocscience

Jan 2020 – Apr 2020

- Developed a user interface control system within the WPF framework that performs the management of all the application's UI elements
- Created a dynamic theme manager for three softwares that allows users to switch, edit, and control themes synchronously within the program
- Gained experience in UI/UX development by utilizing DevExpress tools to help manage 3D viewport elements
- Increased developer usage of the theme manager by up to 50%

Lifeguard & Swimming Instructor

Mississauga YMCA

Mar 2017 – Sept 2018

- Developed problem solving skills while working in one on one special needs classes to find an innovative way to teach students
- Gained patience in teaching swimming skills to groups of 6 - 20 individuals, ranging from first-time toddlers to frightened seniors
- Lead and managed teams in high-pressure life-threatening situations

Head of Computer Science Club

The Woodlands School

Sept 2017 – June 2018

- Developed various marketing and advertising campaigns resulting in the number of club members doubling in just one month
- Designed new weekly lessons on topics such as data types, sorting, and binary trees, resulting in increased student participation and satisfaction

PROJECTS

Connect 4 AI – Using Pygame to put together an AI that utilizes a depth limited minimax algorithm, with alpha-beta pruning processes to optimize search

Sudoku Solver - treated as a constraint satisfying problem to implement a backtracking approach that utilizes the AC3 algorithm to maintain arc-consistency, resulting in a 50% reduction in solve time

Computer Vision - utilized TensorFlow to build neural network layers, OpenCV-python for image processing, and scikit-learn for ML-related functions to train an AI in traffic sign detection for self-driving cars

C++ Games - developed games such as Biquadris and Reversi, with an emphasis on design patterns like Observer, Factory Method and Decorator

Personal Website – independently learned various elements of web development. Check the website at “www.kush.bhagatworld.com”

TECHNICAL SKILLS

Languages

- C++, Python, C, C#, XAML, Java

Frameworks

- WPF, TensorFlow, scikit-learn, DevExpress Unity, Pygame

Front-End

- JavaScript, CSS, HTML

Tools

- Bash, Arduino, Jupyter

AWARDS

- Semi-Finalist in New Venture Competition – 2019
- Semi-Finalist in Starbucks Case Competition – 2018
- President's Gold Scholarship Award – 2018
- Valedictorian – 2013
- Principal's Award – 2013

HOBBIES & INTERESTS

- Competing in Taekwondo sparring and pattern tournaments (2nd degree black belt)
- Challenging myself with coding problems
- Performing in live theatrical plays
- Taking part in choreographed dances for yearly Diwali festivities

EDUCATION

University of Waterloo

Bachelor of Computer Science

Sept 2018 – Present

Courses in: Object-Oriented design and Data structures and Algorithms