

Vijayesh Khullar

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Education

University of British Columbia (Ongoing) | BASc, Faculty of Applied Science

Experience

Math and English Tutor @ Kumon | November 2021 - June 2023

- Facilitated student learning by providing comprehensive instruction in Mathematics and English concepts and evaluated student progress through assignment grading, provided constructive feedback for improvement.
- Managed front desk operations, including seating assignments and communication with current and prospective students as well as parents, ensuring smooth administrative processes.

3D Printing Club | November 2021 - June 2023

- Founder and President of the club, leading and teaching members how to design and use 3D design software to create anything and 3D print using school printers

Projects

Electric ATV (In Progress) | 2024

- Conversion of a gas-powered ATV to an electric-powered vehicle by integrating an electric motor
- Designing and constructing a custom battery from scratch to power the vehicle.
- Adapting the steering, suspension, and braking systems to ensure compatibility and optimal performance with the electric motor.

Hand Gesture Recognition System with Arduino-controlled 3D Printed Hand | 2024

- Utilized an open-source computer vision repository, integrating MediaPipe library in Python, to detect and classify hand gestures in real-time captured from a computer webcam..
- Engineered an Arduino-based microcontroller system to receive and interpret gesture commands from the computer vision application.
- Demonstrated proficiency in leveraging open-source tools and libraries, training machine learning models and hardware prototyping with Arduino to create a gesture control system.

Python Platformer | 2023

- Developed a platformer game using Python programming language and Pygame library.
- Designed and implemented game mechanics, including player movement, collision detection, and level progression.
- Utilized object-oriented programming principles to create modular and reusable code components.
- Integrated sound effects, user interfaces, and visual elements to enhance the gaming experience.
- Troubleshooted and debugged issues to ensure smooth gameplay functionality.

Technologies

Languages: Python, Java, C, HTML5, Arduino, CSS, Javascript

Programs: GitHub, Eclipse, VSCode, LaTeX, Solidworks, Cura, Matlab, Solidworks