Vijayesh Khullar

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

Experience

Technical Writer | Prime Health LTD | July - August 2023
- Developed clear and concise Standard Operating Procedures (SOPs) for packaging machines, enhancing operational efficiency and compliance
- Collaborated with engineering teams to troubleshoot and resolve machine issues, minimizing downtime and optimizing performance

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 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, Altium