

# Jash Dubal

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## EDUCATION

**University of Calgary** – Calgary, Alberta  
BSc in **Electrical Engineering** – May 2022

**Coursework:** Power Systems, Electric Machines and Drives, Computer Networking, Data Structures and Algorithms, Object-Oriented Software Development, Digital System Design

## SKILLS

**Software:** Matlab, Simulink, C, C#, Unity, C++, Assembly Language, Java, Python, CSS, Bootstrap, HTML, Sass, Jira, SQL, Git, CAD, Microsoft Office, VHDL, ETAP, Powerworld, PSCAD

**Hardware:** Oscilloscope, Function Generator, Multimeter, Arduino, FPGA

## PROJECTS

**Mixed Reality Software System for Autistic Students** 07/21– 04/22  
See: <https://schulich.ucalgary.ca/news/myth-busting-technology-gives-people-non-verbal-autism-voice>

- Capstone team developed a mixed reality software system on Microsoft HoloLens2 that improves communication and learning outcomes for autistic students.
- Solution included a custom keyboard, sensory accommodations, a virtual assistant, and fully customizable lesson interface using Unity and C# scripting.
- Coded frontend and backend logic for the software system to allow customizable lesson interfaces, virtual assistant feedback, reading and writing text files, implementing lesson flows, and more.
- Worked closely with academia and industry sponsors to ensure our solution dealt with the engineering and psychological aspects of the design.

**Arduino Water Consumption Device** 09/21– 12/21

- Developed water consumption tracking device to help users stay on top of their consumption needs.
- Designed PCB for the electronics and instruments (Arduino microcontroller, ultrasonic sensor, OLED display).
- Implemented hardware and software solutions to track water consumption data through analog-to-digital conversion and C++ programming.
- Presented key consumption metrics on an OLED display with a sleek UI.

## EXPERIENCE

**Programming Mentor** 09/19 - 05/21  
**Schulich Ignite** – Calgary, Alberta

- Developed and delivered Python programming lessons tailored to students, demonstrating the ability to communicate, manage, and organize at a high level.

**Engineering Intern** 04/19 - 08/19  
**Energy Control Technologies** – Des Moines, Iowa

- Prepared control panel engineering drawings using AutoCAD electrical.
- Performed analog and digital I/O testing with instruments including multimeters and oscilloscopes.
- Tested HMI (Human-machine interface) to ensure compliance with I/O requirements.
- Performed Factory Acceptance Testing with clients.