

# David Kuehnert

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## OBJECTIVE

- To obtain Co-Op experience in the field of Computer Engineering. Available beginning of December 2022

## EDUCATION

### Rochester Institute of Technology, Rochester, NY

#### — Bachelor of Science

Expected graduation May 2023

Major Program: Computer Engineering Technology  
Immersion Program: Mathematics  
Achievements: Dean's List Fall of 2021 and Spring of 2022

## RELATED COURSES

- Real Time & Embedded Systems
- Digital Systems I/II
- Embedded Systems I/II
- Systems, Signals and Transforms
- Digital Signal Processing
- Control Systems

## SKILLS

- **Hardware:** Arduino UNO, Raspberry Pi, STM32
- **Programing Languages:** C/C++, C#, Arduino C, Java, Python, Assembly, MATLAB
- **HDL's:** Verilog, VHDL
- **IDE's:** JetBrains, Arduino, Particle.IO, CubeIDE, Keil, Eclipse, Idle
- **CAD Software:** KiCad, MultiSim, Quartus, Vivado
- **Other:** Microsoft Office, Mac OS, Windows OS, various Linux distros, Google Drive software, oscilloscopes, waveform generators, multimeters, soldering

## PROJECTS

- **Respiratory Rate Detection System:** A real time breathing monitoring system using a cheap LM61 sensor and an Arduino UNO. Digital filters were implemented on the microprocessor for preconditioning and processing. Filter banks and statistical analysis were then used to determine the rate of breath.
- **Water Gauge:** Designed for rough conditions, and semi restrictive environments. This water gauge uses Archimedes' principle to determine a river's depth by measuring pressure differences of a float.
- **B.O.B:** A ball on beam balance system demonstrating fine tuned control loops. Digital filters were implemented on the arduino to create various PID loops, second order transfer functions, lead compensators and more to create a stable system. The project was then expanded into three dimensions using open CV and chAruco tags.

Check out these projects, and many more, on [www.DavidKuehnert.info](http://www.DavidKuehnert.info) for a more indepth look

## WORK EXPERIENCE

### Lock 32 Whitewater Park, Pittsford, NY

May 2018 - August 2022:

- Lead kayak instructor for youth whitewater camps over the summers of 2019-2022. Taught various levels of introductory through advanced kayaking skills to hundreds of students.
- Course, and site maintenance, as well as working the front desk. Which included assisting customers into flat water kayaks, checking clients in, or answering questions.

### Stalwarts Industrial Packaging Inc, Shortsville, NY

December 2018 - Present Day:

- Factory floor worker, completing various tasks all focused around the purpose of building specialty, wooden shipping containers.

## INTERESTS

- Whitewater kayaking, Canoe Slalom Racing, Running, Bouldering, Weightlifting