Kiran Ghanekar

Mechatronics Engineering | University of Waterloo
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Second-year mechatronics engineering student at the University of Waterloo with hands-on experience in board design, embedded systems, and systems integration, through starting a stratospheric balloon program, personal robotics projects, and a background of reverse engineering hardware.

Projects

Stratospheric Balloon

Apr. 2025 – Present

- Leading a 5-person team to design and launch a **remotely controllable stratospheric balloon** with a target ceiling of 35 km.
- First flight date scheduled for late August 2026.
- Personally developed, reflowed, and hand-reworked custom flight computer board with 2-way 925 MHz radio link.
- Overseeing the development and integration of all subsystems: electronics, software, mechanical, sensors, and flight operations.

Experience

Design Co-op

Accu-Temp Systems | Jan – Apr. 2026

- Prepared eight high-quality building controls submittal packages, a **company record** for a co-op student, based on mechanical drawings and best practices.
- Organized and prepared detailed design for **$2 million** retrofit project.
- Created **VBA tooling** to automate parts of submittal generation, saving over 40 hours of manual effort.

Project Assistant

JDX Advance | May – Aug. 2025

- Documented existing conditions at **17 project sites** with photos, measurements, notes, etc., enabling accurate and informed design work.
- Evaluated energy data and proposed retrofit options; wrote reports to communicate impacts and costs to clients.
- Created sets of engineering drawings in AutoCAD for **14 projects**, both retrofit and new build, to ensure that construction proceeded according to client's wishes.

Education

BASc in Mechatronics Engineering

University of Waterloo | Sep. 2024 – Present

- Expected graduation in April 2029.
- Cumulative average: **93.1%**.
- **Relevant courses**:
  - MTE220 (Sensors and Instrumentation)
  - MTE252 (Linear Systems and Signals)
  - MTE262 (Digital Logic)
  - MTE241 (Real-Time OSes)
  - MTE182 (Dynamics)
  - MTE219 (Mechanics)

Skills

- KiCAD, PCB design/assembly
- STM32 layout and programming
- Analog circuit design, LTSpice
- C, C++, Python, MATLAB
- Microsoft VBA
- AutoCAD
- SolidWorks

Awards and Certifications

Certified SolidWorks Associate

Dassault Systèmes | Dec. 2024

- Certificate ID: C-UMH7C9VX4K

Gov. General's Academic Medal

Bronze | The Abelard School | Jun. 2024

- Awarded to the student with the **highest graduating average** at a high school.
- Graduating average: **99.4%**.

Standard First Aid, CPR C & AED

St. John's Ambulance | Exp. Dec. 2028

Ontario 'G' Driver's License