

# Jerica Rattana

BASc in Mechanical Engineering, University of Waterloo, 2017- 2022

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## Skills

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- **Hardware & embedded systems:** ESP32, sensor integration (CO<sub>2</sub>, temperature, humidity, and sound), soldering
- **Mechanical design:** CATIA 3DX, NX, Solidworks, fusion 360, GD&T, DFMEA, DFM, and DVPRs
- **Rapid prototyping:** fixtures, enclosures, wire harnesses, LED systems, 3D printing
- **Test & validation:** thermocouples, NI DAQs, force gauge, load cell, environmental temperature chamber, and Python to run test scripts
- **Interests:** sound, hardware and electronics, design, fabrication, technology and art

## Technical Project

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**Project lead & hardware engineer, Where is Every Body At?! - Technical Art Installation** Sept - Nov 2025

- [Project overview](#)
- Led a 5-person engineering team to design and deploy a distributed sensor network with real-time physical visualization of occupancy
- Designed and built 13 custom ESP32-based sensor nodes (CO<sub>2</sub>, temperature, db) and enclosures; performed hand soldering, assembly, and system integration
- Developed CO<sub>2</sub>-based occupancy estimation and performed on-site calibration
- Distributed sensors throughout the hotel under real-world networking and installation constraints

## Experience

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**Release Engineer, Zoox** – Foster City, CA November 2024 – Present

- Executed mechanical design changes for tester iteration updates; modeled updates in 3DX, created deviation instructions, and coordinated with manufacturing for approvals and implementation
- Designed custom brackets and mounting solutions for PCBAs and components in server-rack hardware testers, optimizing for layout and serviceability
- Led the release of all mechanical design components for the hardware-in-the-loop team, ensuring timely and accurate releases for part, assembly, and drawing documentation in 3DX
- Established the team's engineering drawing standard, including defining tolerances and GD&T practices

**Design Engineer, Lucid Motors** – Newark, CA July 2023 – June 2024

- Led design of accessory items; focus on injection molded TPE mats and storage accessories
- Led regulatory vehicle labeling program for all trims and markets; focus on meeting ongoing production requirements while implementing systematic improvements to reduce cost and complexity
- Restructured the labels program by creating dynamically printed labels that are printed lineside; reducing the number of pre-printed labels purchased from the supplier and held stock; resulting in cost savings of \$20k
- Created and established quality control processes for labels by implementing tools such as scannable matrices and audits to ensure the correct label is installed for each vehicle on the line

**Design Release Engineer, Stellantis** – Remote July 2022 – June 2023

- Drove validation and integration of the forward facing camera into multiple vehicle platforms by managing supplier requirements from validation testing to manufacturing
- Conducted analytical studies to investigate all aspects of camera integration into vehicles, such as packaging studies to test optimal camera mounting positions and ride height analysis to determine camera field of view
- Organized and led meetings to root cause camera failures by investigating ECU software, camera hardware, wire harness and plant processes across multiple suppliers and technical teams