

Molly Urbina

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Seeking a mechanical engineering role in robotics, design, or new product development, preferably in Pittsburgh, PA, or remote.

PROFESSIONAL EXPERIENCE

SKA Robotics *Robotics Engineering Firm* - Mechanical Engineer (Part-Time Freelance) *Mar 2024 - Jul 2024*

- Remediated mechanical design conflicts on an inherited robot design, resulting in improved feature dynamics, risk reduction, simplified parts, and eased assembly.
- Achieved significant part reduction: decreased metal parts by 28% and custom parts by 22%.

Hellbender *Advanced AI-Powered Vision Systems* - Mechanical Engineer II *Apr 2023 - Jun 2024 (Laid-off)*

- Designed housings for thermal, visual, and stereo camera systems across shelf, security, and drone products.
- Engineered a compact dash camera product optimized for robotics assembly with an initial run of 20K units that dissipated heat from SOM, WIFI, and LTE while remaining sealed for outdoor use.
- Enhanced enclosure architecture for injection molded, over-molded, die-cast, ultrasonic welded, 3D printed, and CNC'd parts reducing cost, timeline, and risks.
- Developed heat sinks, conducted thermal analysis, and performed sealing tests on electrical enclosures.
- Collaborated with electrical engineers on 10+ board layouts and component selection for enclosure fitment.

Deeplocal *Interactive Exhibits/Experiences* - Mechanical Design Engineer II *Feb 2022 - Mar 2023 (Laid-off)*

- Developed robotic mechanisms that mimicked the sound and movement of wind chimes to guide guests toward the auditorium in Google's New York office while working with GCs, architects, and designers.
- Performed FEAs, ran simulations, worked with PE engineering companies, and coordinated with architectural engineers to ensure exhibits met building codes and UL regulations.
- Mechanically designed an interactive exhibit that housed seven touchscreens, cameras, RFID readers, lights, and sensors for an interactive exhibit permanently installed in Stripe's California office.
- Implemented SolidWorks PDM, created design workflows, deployed updates, and maintained the system.

IAM Robotics *Warehouse Robotics* - Mechanical Engineer II, Charging Station Tech Lead *Dec 2020 - Feb 2022*

- Led and engineered bidirectional twister arms that extended over a meter past the robot while carrying 60 kg.
- Coordinated and led the creation and development of 100+ Standard Operating Procedures (SOPs).

Deeplocal *Interactive Exhibits/Experiences* - Mechanical Engineering Intern *May 2019 - Aug 2019*

- Created aspects of Nike's shoe exhibit's mechanical design and fabrication of the interactive lights.
- Developed and prototyped the design of an autonomous tissue dispenser for Netflix's Dolly Heartstrings.

Ford Motor Company - Additive Manufacturing Research Intern *May 2018 - Aug 2018*

HEBI Robotics *Custom Modular Robotics Solutions* - Mechanical Engineering Intern *May 2017 - Aug 2017*

BoXZY *3-in-1 3D printer, laser cutter, CNC* - Maker Intern *May 2017 - Aug 2017*

EDUCATION

Illinois Institute of Technology *Aug 2016 - May 2020*

Bachelor of Science in Mechanical Engineering with a Minor in Psychology

GPA: 3.92/4.00

Duchossois Leadership Scholarship Recipient, Summa Cum Laude Graduate, and Dean's List Recipient

SKILLS & CERTIFICATIONS

CAD: Solidworks, SolidWorks PDM and TreeHouse, Autodesk Inventor and Fusion, CATIA, Cura, Creo, Slicer.

Certification in SolidWorks: Professional, Associate, Additive Manufacturing

Software: MATLAB, Microsoft 360, Adobe Photoshop, LaTeX, C++, Python, Bluebeam Revu.