EMMA ROSICKY

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I blend engineering ability with design sensibility, creativity with practicality. I work well in both small startup and large institution settings. I'm a strong communicator, problem solver, and always looking for ways to improve processes.

QUALIFICATIONS

CAD & Modeling:	**Creo Parametric**, **Blender**, **SolidWorks**, **Autodesk Inventor**, Fusion 360, OnShape
Prototyping & Fabrication:	3D Printing, Metal & Woodworking, Upholstery, MIG Welding
Engineering Tools:	GD&T (ASME Y14.5 Certified), Python, **Microsoft Excel & Visual Basic**
Design Communication:	**Miro Board**, Figma, Adobe InDesign

CAREER PROGRESSION

Lawrence Berkeley National Laboratory (ALS-U Project) – Berkeley, California Feb 2023 – Feb 2024

Mechanical Design Associate

- **Designed mechanical components**, technical drawings, and installation instructions in Creo Parametric. **Communicated proactively with machinists and manufacturers** to ensure design clarity, cost effectiveness, and timely delivery.
- Identified & **implemented a new database management process**: this 10,000+ item spreadsheet utilized Visual Basic to reduce calculation times from hours to seconds, now serving as the source of truth for all electrical designs across the project.
- **Organized cross-functional design reviews**, synthesizing feedback from electrical, structural, and installation teams to ensure high quality deliverables.
- Communicated Up: **presented to DOE representatives quarterly** on progress, cost, and strategy; **assembled technical documentation packages** for review by Lead Electrician.

OnePointOne Inc. (Vertical Plane Farming Startup) – San Jose, California Jul 2021 – Dec 2022

Product Manager & Mechanical Engineer

- **Managed 3 engineering teams concurrently** to achieve UL certification and successful initial farm Go-Live: balancing agile processes with commitment to agreed-upon deadlines.
- Produced GD&T accurate CAD drawings in SolidWorks and Inventor, **designed with manufacturing ease in mind.**
- Served as Responsible Engineer for primary mobile robotics subsystem, **reducing payload deployment system errors from 11% to 0.5%**, ensuring uptime to meet forecasted sales and daily output in the leafy green market.
- Used old tech in a creative way to solve a problem: **transforming a 190-minute manual process into 10 minutes of supervised automation**, dramatically increasing throughput and scalability.
- **Developed robot testing plans and pass criteria**, collecting and analyzing error data to inform the next stage of robotic improvements.

Santa Clara University School of Engineering – Santa Clara, California

Senior Design Project: Frugal Urban Greenhouse
(Sep 2020 - Jun 2021)

- Designed a custom greenhouse kit, balancing functionality and aesthetics, enabling food-insecure residents to grow 500+ seedlings seasonally.
- **Reduced greenhouse assembly time by 3 hours, cut material costs by 50%** compared to the previous solution: crops now generate an estimated 13% of a gardener's annual income.
- **Conducted market and patent research** to identify gaps in affordability, ergonomics, and durability, benchmarking competitive designs.
- Built three full-scale mock-ups and **facilitated assembly workshops,** culminating in a set of clear and concise assembly instructions that span language barriers.

Undergraduate Materials Research Assistant
(Jul 2019 - Aug 2019)

- Investigated Ultrasonic Wire Bonding using nanoscale imaging techniques to assess efficacy.
- **Conducted research on current best practices** for material surface preparation.
- Designed and documented standard operating procedures (SOPs) for repeatable sample preparation, **balancing reliability, ergonomics, and material cost.**
- Created 3D MATLAB algorithms to visualize data, analyze performance, and clearly communicate findings.

EDUCATION

Santa Clara University – Santa Clara, California — Graduated Jun 2021
B.S. in Mechanical Engineering, *with a Studio Art Minor* — m. cum laude, GPA: 3.71