Zhihao Wang

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Technical Skills

- **Design**: Strong skill with **SolidWorks** with **CSWA** and **CSWP** certification, Proficient with AutoCAD with Professional Level II certification, Visio, Inventor, Fusion 360, Photoshop
- **Test and analysis**: **SolidWorks**/**Simulink**, Mastercam, ANSYS.
- **Coding and Paperwork**: Python, Java, RS Logix 500, Studio 5000, FT View, Microsoft office, CodeSys

Experience

Pure Process Technology, Nashua, NH

· **Mechanical & System Design Engineer** 2020.01-Present

- **Lead** engineer for **25 +** bespoke water & solvent-purification projects annually—from spec review through **FAT/SAT**—achieving **100 % first-pass IOQ acceptance** and zero missed client delivery dates.
- Negotiated alternative long-lead components and rationalized BOMs, saving around **US $250 k/yr** during peak **supply-chain volatility** without compromising ASTM/USP compliance.
- Built reusable **ladder-logic/FBD** libraries for Allen-Bradley PLCs; field-debug time dropped by **40 %** and **MTBF** rose **18 %** across installed base.
- Produced **Capital Electra X** schematics with automated cross-referencing; design-review cycles shrank from **3 days to 1 day**.
- Spearheaded launch of the **Compact** solvent-purification line with **35 % smaller footprint** while retaining full safety features, opening a new market segment for space-constrained academic labs.

· **Design Engineer** 2019.06-2019.12

- Authored comprehensive **build-drawing books** and rolled them out under a strict **ECO/ECN** regime, cutting assembly lead-time on three **purification-system** product lines by **15 %**.
- Re-engineered P&IDs and 3-D layouts for new **ASTM Type I/II RO/DI** skids; the tighter layout trimmed material waste by **8 %** and improved service access, supporting the company's "industry-benchmark" reputation for performance and reliability.
- Partnered with supply-chain to standardize fast-fit tubing and modular valve blocks, lowering in-process re-work hours by **120 h/yr** and keeping maintenance overhead in line.

Lexington Medical Inc, North Billerica, MA

· **Mechanical Engineer** 2018.07-2019.03

- Created Assembly Record, MP, **flowchart** and Assembly Layout for production assembly process
- Helped Sr. Engineer finish **IQ, OQ and PQ** for the production, tools and fixtures
- Tested different generation production with MARK-10, wrote **Design Verification and Function Validation**

High Performance Material & Structure Lab, Northeastern University, MA, United States

· **Research Assistance** 2017.06-2017.12

- Designed and built 3-D Origami Structure modeling in High Performance Material & Structure Lab.
- Hands on 3-D printer, Force-analysis equipment and Laser Cutting Machine for Origami structure force handling analysis.

Education

· **Georgia Institute of Technology, Atlanta, GA. GPA:3.8** 2023.01-2025.04

- Master of Science degree in Computer Science.

· **Harrisburg University of Science and Technology, Harrisburg, PA. GPA:3.8** 2019.10-2021.10

- Master of Science degree in Project Management.

· **Northeastern University, Boston, MA. GPA:3.7** 2016.09-2018.05

- Master of Science degree in Mechanical Engineering on Mechanic and Design.

· **Tianjin University, Tianjin, China.** 2012.09-2016.07

- Bachelor of Science degree in Mechanical Engineering

Academic Publication

- S. Kamrava, R. Ghosh, **Z. Wang,** & A. Vaziri. "Origami-inspired Cellular Metamaterial with Anisotropic Multi-stability." *Advanced Engineering Materials,* 2018, In press.