

Janna Wang

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Education

Duke University: *B.S. in Mechanical Engineering, B.A. in Comp. Sci. | Minor in Visual Media Studies*

Aug 2023 – Present

Stuyvesant High School

Sep 2019 – Jun 2023

Experience

Amgen

Jun 2025 – Aug 2025

Operations Engineering Intern

Thousand Oaks, CA

- Coordinated with 20+ stakeholders (system owners, schedulers, QA) to identify inefficiencies in 1000+ asset production lines
- Used analytic & visual tooling (Power BI, Excel, Maximo) to redesign maintenance workflows, reducing downtime by 8%
- Developed automated Smartsheet dashboards to track regulatory compliance and enhance operational visibility
- Optimized scheduling infrastructure by integrating live asset data and standard logic fields to improve clarity and usability

UnlockedMaps

Jun 2025 – Aug 2025

- Conducted platform-wide UX audit to implement UI enhancements, improving navigation and visual clarity across the site
- Built WMATA transit API integration to launch Washington DC market and enable live transit data for DC users
- Redesigned city directory interface with improved information architecture and search functionality

Research Assistant, Duke Acoustofluidics Lab - Durham, NC

Dec 2023 – June 2025

- Designed droplet-splitting acoustofluidic device to sort and detect particles (e.g. biomarkers) using AutoCAD
- Fabricated lab-on-a-chip devices with microfluidic channels, integrated wiring, and IDTs for acoustic manipulation
- Conducted multi-technique experiments investigating cellular interactions, sample processing, and bioparticle isolation

Research Fellow, Duke Institute for Brain Sciences (DIBS) - Remote

May 2024 - August 2024

- Developed a MySQL database (AMPPS stack) for large-scale multimedia displays on the DIBS "Cube" building exterior
- Optimized database for diverse media formats by implementing a comprehensive metadata tagging system
- Streamlined data entry processes by developing automated scripts linking spreadsheets with the database

Undergraduate Researcher, Cornell University Cira Lab - Ithaca, NY

Jun 2024 – Aug 2024

- Used Python and MATLAB to collect high-specificity data from Fenton reactions, improving reaction speed by ten-fold
- Investigated workflow improvements (software to reduce processing time, techniques to mitigate sample evaporation)

FIRST FRC Robotics Team 694: VP of Engineering, Director of Lab Operations

Sep 2019 – May 2023

- Led 50+ member engineering team to 13 competition awards through design reviews, CAD instruction, code and hardware testing, and prototyping of critical robot mechanisms
- Managed daily lab operations and safety training for 150+ members

Patents & Publications

- Kaichun Yang, [...] **Janna Wang** [...], et al. "Precision Acoustofluidics for High-Throughput Mechanobiology in Suspension Cells." *Science Advances*, 12 (2026).
- Ty Naquin, [...] **Janna Wang** [...], et al. "An acoustofluidic picoinjector." *Sensors and Actuators B: Chemical*, 418 (2024)
- "Adjustable sliding tray with locking mechanism" – *US Patent Application No. 29/936,005 – Date: Apr 5, 2024*

Projects

Developing Modular Lunch Tray for Durham Public Schools

- Led concept-to-prototype development of modular lunch trays, coordinating CAD design, 3D-printed tooling, and CNC machining to meet client specifications
- Investigated injection molding production methods and secured grant funding for manufacturing scale-up

Accessibility Modifications of Ride-On Toy Car

- Oversaw safety and usability enhancements (rewiring to limit speed, custom 3D-printed modifications, etc.)
- Developed a secure storage solution for wheelchair attachment during car use and documented design iterations

Skills

- **Software & Data Analytics:** Python, Java, MySQL, HTML/CSS, Git, Excel, Power BI, Retool, Tableau
- **Product:** Agile (Scrum, Kanban), Lean Six Sigma, Roadmapping, Jira, Trello, Smartsheet, Airtable, Miro, Powerpoint
- **Prototyping:** SolidWorks, AutoCAD, Fusion 360, Onshape, CNC, Arduino, Laser Cutting, 3D Printing, Hand/Power Tools
- **UI/UX:** Figma, InDesign, Wireframing, User Research, Personas, Journey Mapping, Usability Testing
- **Wet Lab:** Microfluidic Fabrication, Fluid Handling, Optical Analysis (Microscopy, Spectroscopy, Nanoparticle Tracking)