

Justin Chen

justin.chen@cooper.edu | (718) 598-8088 | jchenengineering.com | linkedin.com/in/jchenengineering

EDUCATION

The Cooper Union

Bachelor of Engineering in Mechanical Engineering

- Dean's List (2024 – 2026); GPA: 3.92/4.0

New York, NY

Expected May 2028

EXPERIENCE

Molex

Manufacturing Engineering Intern

- Spearhead the deployment of 4 unique machines onto the plant floor – representing nearly **\$350,000** in capital investments – to drive continuous improvement initiatives for existing manufacturing lines
- Execute equipment run-off for the flagship automated socket stitcher machine, drafting equipment and process validation plans, resolving machine faults, and establishing a pre-shipment punchlist
- Integrate Keyence automated vision systems into inspections for over **29** unique part numbers, reducing dimensional inspection time by **~90%** and formalizing objective pass/fail criteria.

Erie, PA

May 2026 – Present

The Penguineering Team

Design Engineering Intern

- Standardized a **2-foot** penguin robot assembly consisting of **100+** unique parts in SOLIDWORKS, ensuring strict clearances and compatibility between components
- Processed CT scans using Meshmixer to prototype robot's flippers, featuring modular ball-and-socket joints
- Redesigned lower-limb and foot assemblies by integrating an additional motor for yaw movement; improving walking kinematics and increasing the robot's mobility to **3** degrees-of-freedom
- Modeled an exterior shell and battery compartment to house electronics for improved reliability and aesthetics

New York, NY

October 2025 – May 2026

Ecolibrium

Systems Engineering Intern

- Engineered low-cost monitoring systems for 20A loads to calculate RMS current, enabling seamless data export
- Optimized thermal data accuracy by **~55%** through systematic calibration and iterative debugging
- Wired ESP32 systems integrated with SEN66 sensors for environmental data collection
- Developed firmware in Python and C++ to receive environmental sensor inputs and display real-time telemetry

New York, NY

March 2025 – August 2025

Aviation Maintenance Technology

Aviation Maintenance Technician

- Overhauled reciprocating and jet engines, and manufactured sheet metal and composite aircraft components
- Performed various inspections and preventative maintenance procedures on aircraft to validate airworthiness
- Maintained accurate documentation of repairs and inspections for compliance and safety records

New York, NY

September 2020 – June 2024

PROJECTS

Mechanical Rectifier

- Designed a mechanical rectifier through Onshape using a flyball governor and flywheel system to convert sinusoidal inputs to constant, unidirectional rotation
- Quantified performance using Tracker Video Analysis and Arduino IDE to measure effectiveness
- Iterated systems for best results: reduced oscillations by **18 dB** (or **~87%** attenuation) with 6-9V power inputs

January 2025 – May 2025

SKILLS

Core Competencies: Lean Manufacturing, Design, Machining, 3D Printing, Arduino

Languages: MATLAB, Python, C/C++, HTML, CSS

CAD/CAE: ANSYS, SOLIDWORKS, Creo, Onshape, AutoCAD, Meshmixer