

# Jaeho Cho

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## EDUCATION

### The Cooper Union for the Advancement of Science and Art

New York

*Bachelor of Engineering in Electrical Engineering, Bioengineering Minor*

*Graduating 2026*

- Half Tuition Scholarship | Myron Coe Scholarship | Full Tuition Scholarship 2026-2027
- **Courses:** Machine Learning, Digital Signal Processing, Communication Theory, Hardware Design, Electronics, Data Structures & Algorithms, Computer Architecture, Linear Algebra, Ordinary & Partial Differential Equations, Probability

## EXPERIENCE

### The Cooper Union • New York, NY

*Sep 2024 – Present*

*The Pre-Medical & Pre-Dental Society | Founder/President*

- Established a support network for pre-medical/dental students, addressing Cooper Union's limited guidance for these tracks.
- Built a growing network of medical students, healthcare professionals, and alumni to mentor and support society members.

### The Cooper Union • New York, NY

*Sep 2022 – Present*

*Vertically Integrated Projects | Bioengineering*

- Building open-source, low-latency compliant robotic arms optimized for direct human interaction with computer vision.
- Simulated robotic pose mimicking systems in Gazebo using OpenCV & ROS2 for collision detection and testing.
- Designed & fabricated a custom PCB for an eTextile sensor, presented at the 2024 ASTM International Exo Games.

### PWC • Seoul, South Korea

*May 2024 – Aug 2024*

*Hanwha TotalEnergies Petrochemical | Data and AI Intern*

- Developed and enhanced time series forecasting models to predict prices of flagship petrochemical products (SM, PX).
- Refactored backend data pipelines, transitioning from MongoDB to ClickHouse and improving data flow efficiency.
- Built web backend for business analysts, delivering market insights through sentiment analysis and forecasting predictions.
- Implemented MLOps pipelines, automating data collection, ingestion, and deployment monitoring

### Mount Sinai • New York, NY

*Feb 2024 – Aug 2024*

*Mechanical Exposure Study | Research Assistant*

- Spearheaded the analysis of Xsens IMU data using MATLAB to quantify mechanical exposure among industrial workers.
- Implemented an automated pipeline for data collection, labeling, and analysis, streamlining the research process.

### The Cooper Union • New York, NY

*Jun 2023 – Aug 2023*

*Design and Drawing | Teacher Assistant*

- Taught 24 high school students the fundamentals of engineering design, circuit design, Arduino and Onshape CAD.
- Led workshops on Arduinos and circuit design, culminating in students building 3D printed interactive 4-DoF robotic arms.

### St. Joseph's Medical Center • Yonkers, NY

*Jun 2023 – Jul 2023*

*Dr. Steve Doh (anesthesiologist) | Shadow*

- Observed various medical procedures, including endoscopies, laparoscopies, orthopedic surgeries, and open surgeries.
- Gained insight into the integration of advanced technology in surgeries, including the Da Vinci surgical system.

## PROJECTS

### 32-bit Pipelined MIPS Processor

*Sep 2024– Oct 2024*

- Designed, implemented and simulated the processor in Vivado, achieved full positive slack with a clock period of 14 ns.

### Amplifier Design for Transceiver

*Apr 2024– May 2024*

- Achieved 12dB voltage gain at 1GHz and 8mW power consumption using a two-stage amplifier, simulated in Virtuoso.

### Prosthetic Hand

*Aug 2021– Sep 2023*

- Designed and built a 6-DoF myoelectric prosthetic hand with a friend who has a congenital left-hand anomaly (acheiria).

## SKILLS

- **Programming:** Python, MATLAB, C, C++, Verilog, Git, Docker, SQL, Django, React
- **Software:** ROS2, Blender, Onshape, Fusion360, Inventor, Altium, Vivado, Virtuoso, Gazebo, LTspice
- **Certification:** NYS EMT, CPR