Jaeho Cho

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Education

The Cooper Union for the Advancement of Science and Art   *Graduating 2026*
Bachelor of Engineering in Electrical Engineering, Bioengineering Minor

- Half Tuition Scholarship | Myron Coe Scholarship | Full Tuition Scholarship 2025-2026
- Courses: Machine Learning, Digital Signal Processing, Communication Theory, Hardware Design, Electronics, Data Structures & Algorithms, Computer Architecture, Linear Algebra, Ordinary & Partial Differential Equations, Probability

Experience

Data and AI Intern | Hanwha TotalEnergies Petrochemical   *Seoul, South Korea*
PWC   *May 2024 – Aug 2024*

- Developed and optimized advanced time-series forecasting models using GluonTS, Chronos, and Darts to generate actionable price predictions for flagship petrochemical products, enabling data-driven decision-making.
- Refactored backend data pipelines, transitioning from MongoDB to ClickHouse and improving data flow efficiency.
- Developed a web backend for business analysts, automating the aggregation of news and articles via APIs and integrating LLM-driven sentiment analysis with aforementioned forecasting models to enhance market insights.

Teacher Assistant | Design and Drawing   *New York, NY*
The Cooper Union   *June 2023 – Aug 2023*

- 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 4-DoF robotic arms.

Extracurricular Activities

Founder/President | The Pre-Medical & Pre-Dental Society   *New York, NY*
The Cooper Union   *Sept 2024 – present*

- Established a support network for pre-medical/dental students, bridging gaps in guidance at the Cooper Union.
- Coordinated events such as a blood drive that attracted 40 donors and resulted in 37 blood donations, as well as alumni networking sessions that facilitated connections between students, medical school attendees, and professionals.

Project Lead | Bioengineering Vertically Integrated Projects   *New York, NY*
The Cooper Union   *Sept 2022 – present*

- Building open-source robotic arms for compliant human interaction, leveraging Mediapipe and OpenCV for real-time pose detection and integrating ROS2 for seamless control logic and interfacing with the OpenMANIPULATOR-X system.
- Simulated pose mimicking systems in Gazebo, using MoveIt2 & ros2_control for collision detection and motion planning.
- Designed & fabricated a custom PCB for an eTextile sensor, presented at the 2024 ASTM International Exo Games.

Research Assistant | Mechanical Exposure Study   *New York, NY*
Mount Sinai   *Feb 2024 – Aug 2024*

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

Shadow | Dr. Steve Doh (anesthesiologist)   *Yonkers, NY*
St. Joseph's Medical Center   *June 2023 – July 2023*

- Observed 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.

Skills

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