# Bowen Jiang

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## Education

**Duke University '27** — Durham, NC
- Major in Biomedical Engineering and Electrical & Computer Engineering, GPA 3.866 — Aug 2023
- Selected courses: Linear Algebra & Application, Data Structures & Algorithms, Microelectronic Devices and Circuits, Quantitative Physiology and Biostatistical Applications, Deep Neural Networks, Marx Nietzsche Freud, PDE & ODE

**Western Reserve Academy '23** — Hudson, OH
- Member of the Cum Laude Society, USABO Semifinalist — Aug 2019

## Computational Skills and Strengths

**Computational Skills** – Python (Pandas, scikit-learn, ML, Protein Language Models), ImageJ, CAD, HTML, OpenCV, PLR
**Core Strengths** – machine learning, automation, data analysis, computer vision, computational biology

## Research and Internship Experience

**Tetsuwan Scientific, Intern** — San Francisco CA
- Building AI-scientist to automate life science research in an 8-person startup team — May 2025 – Aug 2025
- Automated Nanopore sequencing pipeline on Opentron Flex using CAD, Cluade tool use, etc.
- Automated bacteria colony picking and bacteria spreading through using OpenCV, CAD, etc.
- Built and published the first ever lab automation wiki for everyone @ labautowiki.org

**Chory Lab, Student Researcher** — Durham, NC
- Applying robotics-aided directed evolution to study and engineer chromatin binding proteins — Aug 2024 – Present
- Worked extensively on bacterial transformations and contributed to PyLabRobot (PLR)

**Barrett Lab at Broad Institute, Summer Intern** — Cambridge, MA
- Conducted Cell Painting Assay and induced neurons for Down Syndrome morphology observation — Jun 2024 – Aug 2024
- Applied machine learning to extract key traits related to DS, reached 83% prediction accuracy
- Abstract published by the Harvard Summer Undergraduate Research Village

**Navid NaderiAlizadeh Lab, Student Researcher** — Hybrid
- Formulated a primal-dual constraint learning problem to tackle protein pathogenicity prediction — Apr 2024 – Present
- Fine-tuned ESM2 models with PEFT LoRA and constraint relaxation to improve results by 5%
- Preparing manuscript for submission

**Musah Lab, Independent Study** — Durham, NC
- Engineered functional podocyte cells using iPSC and conducted injury treatment — Oct 2023 – May 2025
- Identified 6 important genetic pathways related to podocyte injury from scRNA-seq data

**Apple, DMP Intern** — Beijing, China
- Constructed a Prophet-based ML model to predict 15-week Mac sales, improved MAPE by 56% — Jun 2023 – Aug 2023
- Performed feature engineering with Pandas and tested Lightgbm model to predict weekly iPhone sales
- Incorporated the final Prophet model into the data team's prediction workflow

## Leadership and Extracurriculars

**Duke Chinese Student Association, Co-President** — Durham, NC
- Lead the only undergraduate Chinese cultural association on campus — Apr 2025 – Present

## Submitted/Published Publications

**Stem Cell Reports, 2nd Author** — Submitted on May 31st, 2025
"Discovery of kidney disease targets using multimodal human podocyte injury models"