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 — May 2025 – Aug 2025

- Building AI-scientist to automate life science research in an 8-person startup team
- 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 — Aug 2024 – Present

- Applying robotics-aided directed evolution to study and engineer chromatin binding proteins
- Worked extensively on bacterial transformations and contributed to PyLabRobot (PLR)

Barrett Lab at Broad Institute, Summer Intern — Cambridge, MA — Jun 2024 – Aug 2024

- Conducted Cell Painting Assay and induced neurons for Down Syndrome morphology observation
- 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 — Apr 2024 – Present

- Formulated a primal-dual constraint learning problem to tackle protein pathogenicity prediction
- 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 — Oct 2023 – May 2025

- Engineered functional podocyte cells using iPSC and conducted injury treatment
- Identified 6 important genetic pathways related to podocyte injury from scRNA-seq data

Apple, DMP Intern — Beijing, China — Jun 2023 – Aug 2023

- Constructed a Prophet-based ML model to predict 15-week Mac sales, improved MAPE by 56%
- 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 — Apr 2025 – Present

- Lead the only undergraduate Chinese cultural association on campus

Submitted/Published Publications

Stem Cell Reports, 2nd Author — Submitted on May 31st, 2025

"Discovery of kidney disease targets using multimodal human podocyte injury models"