# Ethan Feldman

New York, NY | (440) 829-7244 | ethanfeldman23@gmail.com

## EDUCATION

**New York University,** New York, NY 08/2023 – Present
Bachelor of Science, Applied Physics
Cumulative GPA: 3.85
Honors: Global Leadership and Sustainability Scholar, Dean's List
Expected Graduation Date: May 2027
Relevant Coursework: Data Analysis, Analytical Mechanics, Advanced Linear Algebra and Complex Variables, Economic Foundations of Finance

## EXPERIENCES

*Researcher,* **NYUAD Center for Quantum and Topological Systems,** Abu Dhabi, UAE 05/2025 – Present
- Designed a novel pulse sequence, improving max polarization transfer in NMR by up to **100x** under dipole-dipole interactions
- Automated sequence design in **MATLAB** using linear programming, cutting iteration development time by 72%
- Utilized Average Hamiltonian Theory to model the effect of RF oscillations the Hamiltonian of a powder of NV-Center

*Engineering Design Intern,* **Urbz,** Mumbai, India 01/2025 – 05/2025
- Designed a QR code-based system to better manage issue reporting, cutting time spent responding to reports by **90%**
- Composed a real time updating dashboard in **Tableau**, reducing the waiting time to have a light fixed by **30%**
- Constructed ETL data pipelines that ensured **99.7%** dashboard uptime

*Data Analyst Intern,* **FEMA,** New York, NY 07/2024 – 10/2024
- Engineered data integration workflow from **SharePoint** to **Power BI** using Power Query and scheduled refreshes, enabling live dashboard updates
- Improved formatting on a **PowerBI** dashboard, resulting in a 24% reduction in reading time
- Worked directly with stakeholders to iterate visualizations in **Tableau**, improving the dashboard usage rate by 50%

*Researcher,* **NYU Tandon UGSRP,** New York, NY 06/2024 – 08/2024
- Improved data collection speed by **110x** with an **ETL pipeline** connecting instruments to the database built in **Python**
- Numerically calculated transmission coefficients as a function of energy, successfully predicting the Ramsauer minimum to **99.9% accuracy**
- Approximated the electron distribution of Argon to **98% accuracy** via finding the period of successive Ramseur minima
- Implemented Finite Difference based PDE solvers to predict the result of nuclear-electron collisions to **99% accuracy**

## LEADERSHIP

*Committee Member,* **New Club Development Program** 08/2024 – 05/2025
- Designed a process to judge 64 clubs on their potential viability and delivered recommendations on whether they should be admitted
- Successfully mediated 7 disputes between clubs, avoiding the need for a judicial panel
- Re-wrote the model constitution that applies to all clubs within NYU, improving equity in elections

*Undergraduate Leader,* **Design for America** 08/2023 – 01/2025
- Planned and led an Ideathon with **100+ participants**, generating multiple viable startup ideas
- Won an award for best club leadership out of **150+ clubs** within the engineering school
- Led the best recruitment season in club history, gaining **80+ new signups** and an average meeting attendance increase from 5 to 25

## PROJECTS

**UW Data Science and Oceanography- Plankton Classifier**
- Fine-tuned ResNet-50 in TensorFlow to classify various varieties of plankton, achieving a **93% accuracy**
- Implemented a FiLM layer to utilize environmental data to condition the classification task on the image metadata, improving accuracy to **99%**
- Won the award for **best overall project**, competing against over 400 program applicants.

**JanusQ**
- Implemented logic and quantum arithmetic to translate ML models from keras files to quantum oracles in **Qiskit**
- Developed a variation on quantum counting to successfully achieve a **polynomial speedup** in counting images of plankton species
- Utilized circuit optimization and relative phase Toffolis to **cut down T count by 60%**

## SKILLS

Python, Rust, Git, MatLab, Java,