

EDUCATION

- **University of Pennsylvania, School of Engineering and Applied Science** Philadelphia, PA
Bachelor of Science in Engineering, Computer Science Sept. 2020 – May 2024
- **Lower Moreland High School** Huntingdon Valley, PA
Rigorous STEM Oriented AP Courseload Sept. 2016 – June 2020

WORK EXPERIENCE

- **Children's Hospital of Pennsylvania** Philadelphia, PA
Cardiology Research NTP Summer 2019 – Present
 - **Computational Biology Researcher & Software Developer:** Designed and implemented software to automate the morphometry of histologically stained, stent-implanted arteries. Researched the application of unsupervised learning to the segmentation of medical images. Primarily utilized Python, PyTorch, and OpenCV.

INDEPENDENT EXPERIENCE

- **Projects**
 - *Complete portfolio available on GitHub*
 - **Reconstruction of Phylogenetic Trees via Levenshtein Distances of RNA:** Study conducted to the evaluate the effectiveness of using the edit distance (Levenshtein Distance) between RNA sequences of species in reconstructing their phylogenetic tree.
 - * **Notable Awards:** PJAS Director's award for "Most Outstanding Senior High Project in the area of Computer Science"; Schrödinger Award for Excellence in Student Science Research; Biophysical Society Award; US Dept. of Agriculture Future Scientist Award; Regional, State, and Interstate First & Second Places across the PJAS, MontCo, and DelVal Science Fairs
 - **Diagnosing Malignant Breast Tumors via Machine Learning:** Study conducted to test the application of machine learning algorithms in the diagnosis of malignant breast tumors, based on numerical data extracted from fine needle aspiration.
 - * **Technologies:** Python, SKLearn, Pandas, Scipy **Notable Awards:** Regional & State First Places at PJAS; Villanova Award for Applied Statistical Analysis; First Place in C500 (Computer Science) at MontCo Science Fair
- **Extracurricular** Lower Moreland HS & Others
 - **Founder and President of the LMHS Computer Science [Coding] Club:** Organized and managed a club dedicated to coding, solving Computer Science problems, and hackathon-style development.
 - **Recurring Volunteer Leader & Teacher of the Pine Road Elementary Coding & Robotics Clubs:** Assisted with the leadership of a large group of elementary school students working on introductory robotics, in addition to teaching introductory Python & CS concepts to a select group.
 - **SPDL Public Forum Debate Finalist, Judge, & Team Captain:** Competed and Judged in the Southern Pennsylvania Debate League, specifically in Public Forum, which covers a multitude of both foreign and domestic socio-economic topics. Served as captain of the Debate Team during my final year.
 - **LMHS Chess Team:** Competed in the Lower Bucks County Scholastic Chess League on the LM Team.
 - **Mathematics Team Captain:** Led a team from LM in an Inter-Scholastic online mathematics league, in addition to being a leader of the LM Math Club, which acts as a meeting place for students passionate about mathematics.
 - **Frequent Hackathon Participant & Winner:** Frequent team leadership positions in regional & national hackathons, e.g HackGFS, CodeDay Philly, PennApps, PennApps Retro.

SKILLS

- **Python:** Developed numerous projects, research studies, simulations, and scripts in Python 3.
- **Java:** Extensive experience with Java for both application development and scientific computation.
- **Web Development:** Introductory knowledge of HTML5, CSS3, JS, and multiple web-oriented frameworks.
- **Machine Learning:** Introductory knowledge & application of machine learning technologies, e.g Supervised & Unsupervised Learning, Deep Learning, etc.
- **Languages:** Fluent in English & Russian; Proficient in Hebrew & Spanish.