Ari Mirsky

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Education

Cornell University — Ithaca, NY
John McMullen Dean's Scholar — *Aug. 2021 – Present*
B.S. in Computer Science, In Progress (Anticipated May 2025)
GPA: 4.15/4

Briarcliff High School — Briarcliff Manor, NY
Regents Diploma with Honors and Distinction in Mathematics — *Sep. 2017 – June 2021*
GPA: 101.36/100

Relevant Courses

- Introduction to the Analysis of Algorithms
- Computer System Organization and Programming
- Data Structures and Functional Programming
- Object Oriented Programming and Data Structures
- Discrete Structures
- Linear Algebra for Engineers
- Differential Equations for Engineers
- Multivariable Calculus for Engineers
- AP Computer Science A
- AP Mathematics: Calculus BC

Experience

Programmer Analyst, Niemack Research Group — May 2022 – Present
Cornell University (40 hrs/wk) — *Ithaca, NY*
- Modernized legacy excel programs into Python
- Created an automated data pipeline from telescope parameters to constraints on cosmological parameters
- Published open source generalizable code for other telescope designs and locations

Navigation Developer, Cornell Autonomous Bicycle — Oct. 2021 – Present
Cornell University (10 hrs/wk) — *Ithaca, NY*
- Contributed to a repository with 25k+ lines of code
- Worked with a team to create path following and collision avoidance algorithms
- Integrated bicycle hardware with pathing software using ROS

Research Assistant, Rivnay Research Group — Sep. 2018 – June 2020
Northwestern University (40 hrs/wk Jun.-Aug., 10hrs/wk Sep.-May) — *Evanston, IL*
- Independently designed and conducted experiments about properties of organic electrochemical transistors
- Created documentation for newly constructed apparatuses
- Wrote 12 page research paper summarizing findings

Projects

Boggle Solver | *JavaScript, React, Git* — Jan. 2022 – Present
- Created machine learning image recognition for a picture containing a grid of letters
- Utilized dynamic programming to efficiently compute longest words in the letter grid
- Built a web application using the React framework

Inverted Pendulum Game | *Java, Git, Swing* — Dec. 2021 – Present
- Created a game about balancing an inverted pendulum
- Designed a custom user interface using Swing
- Implemented user-adjustable difficulty settings

Discord Bot | *Python, Discord.py* — June 2021 – July 2021
- Created a discord bot that responded to messages sent in selected discord servers
- The bot asynchronously responded to user input
- Integrated with open source Discord.py

Technical Skills

Languages: Java, Python, JavaScript, HTML/CSS, R, OCaml, C++, TypeScript, Rust
Frameworks/Libraries: Swing, FastAPI, Discord.py, ROS, Gazebo, NumPy, Matplotlib
Developer Tools: Git, Visual Studio Code, Eclipse, BlueJ, Jupyter Notebook, Conda, React