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: 4.06/4

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

Experience

Software Engineer, Amazon — May 2023 – Aug. 2023
UnifiedAuth Team — *New York, NY*
- Visualized call graph between microservices within Amazon
- Used SQL queries through Amazon's Redshift to process telemetry data
- Created a microservice using EC2 instances alongside S3 buckets that allowed services within Amazon to determine their callers' Transitive Authentication adoption status
- Preprocessed data hourly to maintain low latency responses with up-to-date information

Programmer Analyst, Niemack Research Group — May 2022 – May 2023
Cornell University — *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
- Produced simulated maps of the sky using calculated sensitivity data

Navigation Team Lead, Cornell Autonomous Bicycle — May 2022 – Present
Cornell University — *Ithaca, NY*
- Managed a software team of 6 developers
- Researched, designed, and implimented reinforcement learning algorithms for obstacle avoidance, including Q-learning
- Researched and designed supervised machine learning algorithm using a random forest approach for determining how densly to sample the state space
- Constructed a future plan for the team to transition from an autonomous bicycle to autonomous drone once autonomous bicycle testing is finished

Navigation Developer, Cornell Autonomous Bicycle — Oct. 2021 – May 2022
Cornell University — *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

Projects

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

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
- Honors Linear Algebra
- Operating Systems
- Probability and Statistics

Technical Skills

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