# ELIJAH SANDLER

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Available July 2024 - December 2024

## EDUCATION and ACADEMIC HONORS

**Northeastern University,** Boston, MA | Khoury College of Computer Sciences     Sept 2022 - Present
*Candidate for B.S. in Data Science, B.S. in Philosophy*     Expected Graduation May 2026

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| **Honors:** | GPA: 3.95/4.0 | Dean's List |
| **Relevant Coursework:** | Algorithms & Data Structures, Database Design, Linear Algebra, Probability and Statistics, AI Ethics, Ethics and Evolutionary Games, Technology and Human Values |
| **International Program:** | England and the Scientific Revolutions, *London, UK*    July 2023 |
| **Activities:** | AI and Data Ethics Working Group, Philosophy Club, Ultimate Frisbee Team |

## TECHNICAL SKILLS

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| **Languages:** | *Proficiency in* Python | *Familiarity with* C++, SQL |
| **Libraries and Tools:** | BeautifulSoup, Git, NumPy, Pandas, Plotly, scikit-learn, TensorFlow |

## WORK EXPERIENCE

**Research Assistant** | Northeastern University, *Boston, MA*     Sept. 2023 - Dec. 2023
- Conducted literature review for a research project on the simulation hypothesis.
- Updated project research team on extent of existing technical and philosophical literature.
- Advised research team on feasibility and direction of project.

**Machine Learning Methods Research** | Northeastern University, *Boston, MA*     Aug. 2023 - Present
- Won PEAK award research grant from Northeastern University's Office of the Provost.
- Researched and applied novel machine learning methods for cases with high variance.
- Presenting at the 2024 Northeastern RISE (Research, Innovation, Scholarship, Entrepreneurial) Expo.

**Ultimate Frisbee Coach** | Brookline High School, *Brookline, MA*     Mar. 2023 - Present
- Coach Brookline High School Boys JV Ultimate Frisbee team.
- Responsible for running JV program, including scheduling, training, communication, and logistics.

**Soccer Referee** | United States Soccer Federation / Boston Area Youth Soccer.     Aug. 2015 - May 2021
- Served as licensed United States Soccer Federation and Boston Area Youth Soccer referee.
- Liaised for officials, players, coaches, and spectators.

## PROJECTS

**NBA Elo Ratings** | Python     Dec. 2023 - Present
- Implemented an Elo algorithm to calculate NBA team strengths and produce dynamic visualizations.
- Identified and analyzed discrepancies with other popular metrics of NBA team strength.
- Future features include a player rating system, user-friendly interface, and predictive analysis.

**Predator-Prey Simulation** | C++, Python     Nov. 2023 - Dec. 2023
- Used object oriented programming to illustrate dynamics between predator and prey populations.
- Stored simulation data, which was displayed via static and animated graphs.

**Evolutionary Ethics Simulation** | Python     Oct. 2023 - Dec. 2023
- Used TensorFlow to build a neural network to explore the Lewis signalling game as a model of the minimal conditions for the evolution of meaning.
- Successfully validated hypothesis and discussed significance of the findings.

**Fantasy Premier League (FPL) Predictive Model** | Python     Mar. 2022 - Present
- Built scripts to collect data from various sources and perform machine learning tasks including regression and linear programming with the goal of identifying good FPL assets.
- Created a new metric for FPL asset strength.
- Future features include autonomous play, improved visualizations, and user-friendly interface.

## INTERESTS

**Outdoors:** Camping, Hiking
**Sports:** Chess, Soccer, Basketball, Frisbee, Motorsports
**Miscellaneous:** Reading, Role-Playing Games, Simulation and Strategy Games, Urban Planning