Jinhan Park

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Education

University of Michigan, Ann Arbor, MI — January 2025 - Present
College of Literature, Science, and the Arts
Candidate for Bachelor of Science in Mathematics

Northeastern University, Boston, MA — August 2023 - December 2024
Khoury College of Computer Sciences, John Martinson Honors Program
Candidate for Bachelor of Science in Computer Science, Minor in Mathematics **GPA: 3.97/4.00**

Honors: Dean's List (Fall 2023, Spring 2024, Fall 2025)
Relevant Coursework: Discrete Structures, Programming in C++, Introduction to Databases, Foundations of Data Science, Calculus 3 for Science and Engineering, Advanced Probability and Statistics

Research Experience

Khoury Vis Lab — August 2024 - December 2024
Undergraduate Research Assistant

- Conducted research under Professor Lace Padilla and Postdoctoral research Anjana Arunkumar on healthcare diagnostic and treatment decision support.
- Analyzed decision aids to identify elements in information science that contributes to better patient outcomes
- Used D3.js and Vega-Lite to visualize healthcare data, improving interpretability in diagnostic forecasts.

Visualizing the Stellar Evolutionary Path — August 2023 - April 2024
Undergraduate Research Assistant

- Conducted research under Professor Charles El Mir on Decision Tree (DT) modeling for stellar evolutionary pathways, given an unknown star's mass.
- Utilized MySQL to analyze star mass datasets, and applied the sigmoid function to model star classification probabilities using numpy and pandas library in Python.
- Presented the research at RISE 2024, Northeastern University's premier Research, Innovation, and Scholarship Expo.

Projects

Proving the Central Limit Theorem — November 2024 - December 2024

- Proved the Central Limit Theorem (CLT) by showing that averages of any set of random variables, when suitably scaled, have distributions that can be approximated by a standard normal curve.
- Utilized Python to analyze samples from Uniform, Binomial, and Poisson distributions with different parameters to confirm normal curve approximation.

Pokemon Showdown Analysis — October 2024 - December 2024

- Built a web scraping pipeline using Selenium and BeautifulSoup to extract and preprocess Pokémon data.
- Implemented Linear Regression and Perceptron models using SGDClassifier, achieving 68% accuracy in classifying the characteristics of CAP vs non-CAP Pokémon

Learn Flow — February 2024 - March 2024

- Developed a web application offering structured content at Beginner, Intermediate, and Advanced levels for concept mastery.
- Implemented a Python script utilizing the YouTube Data API to retrieve and filter educational content.

Modelling the Pathway Traveled by Red — January 2023 - May 2023

- Developed a full mathematical model of projectile motion in Angry Birds, analyzing the effect of air resistance on the bird Red's trajectory
- Derived differential equations for projectile motion using Kinematics, Drag force, Integral calculus, and first order separable differential equations to ultimately model velocity decay
- Conducted empirical video analysis using Logger Pro by extracting frame-by-frame data for displacement and velocity.