

Corbin Diaz

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Education

Northwestern University

Evanston, IL

Double Major in Data Science & Mathematics, Minor in Cognitive Science

Expected Graduation: June 2026

- **GPA:** 3.9/4.0
- **Relevant Coursework:** Computational Neuro, Molecular & Cellular Neuro, Systems and Behavioral Neuro, Neuro of Learning and Memory, Bioethics, Machine Learning, Mathematical Foundations of Neural Networks, Applied Dynamical Systems, Data Structures & Algorithms, Data Science for Python, Data Visualization
- **Awards:** Junior Career Award in Math, 1st in NU Integration Bee, Award for Excellence in Math by a First-Year Student

Skills

Data Science, Analysis & Visualization:

- Expert in python data science packages such as pandas, matplotlib, seaborn, scikit-learn, obspy.
- Strong experience in regression, CV-search, decision trees, clustering, GLMs, neural networks, reinforcement learning
- Proficiency in data cleaning, wrangling, HTML web scraping, and data management in SQL.
- Expert in designing graphics (plots, charts, maps) and interactives in R (ggplot2, Shiny), Tableau, Domo.com, Streamlit

Math: Strong problem-solving skills in Stats/Probability/Stochastic Processes, Linear Algebra, Calculus, Real Analysis, Dynamics

Additional Technical Skills: MATLAB, Microsoft Office Certification (Word, Excel, PowerPoint), HTML/CSS, Premiere Pro

Research

Undergraduate Honors Thesis on Modeling Zebrafish Locomotion

Evanston, IL

Department of Neurobiology, Department of Statistics & Data Science

(August 2025 – Present)

- Theorized model of zebrafish swim bouts using linear E- oscillator neural RNN and biomechanical dynamics framework.
- Analyzed regression, control theory, and variational inference methods to infer parameters and evaluate with real data.
- Presented research during talk for NU undergraduate math society and used research results to write Honors thesis.

Independent Research on Signal Recovery and Reconstruction

Evanston, IL

Department of Earth, Environmental, & Planetary Sciences

(June 2025 – August 2025)

- Researched mathematical algorithms to signal reconstruction using harmonic analysis and stochastic optimization.
- Developed an iterative trace assignment algorithm improving performance of analogue seismogram digitization.

Undergraduate Research on Infrasound Signal Processing

Evanston, IL

Department of Earth, Environmental, & Planetary Sciences

(September 2024 – April 2025)

- Research and programmed python code for cross-correlation and template matching on infrasound data.
- Deployed code to classify mysterious infrasound signal & design visualizations to present poster at research symposium.

Projects

WildCards App

(April 2026)

- Built 3000+ player database through web-scraping to support sports trading card app launched during hackathon.

Business Leasing Prediction Model

(April 2025)

- Managed and strategized with Datathon team to develop CatBoost classification model with 96% test accuracy.

Music Networks Report: Mapping Genre Preferences onto A Social Network

(February 2025)

- Analyzed music tastes throughout a social network using KNN clustering, graph visuals, and Markov chain analysis.

NOAA Major Storm Data Visualization

(August 2023)

- Designed user-friendly R Shiny interactive of NOAA data to view distribution and damage reports of storms across US.
- Won 1st place Data Interactive at 2025 Northwestern CoDEX research symposium.

Experience

Teaching Assistant in Mathematics

Evanston, IL

Single Variable & Multivariable Calculus

(September 2024 – June 2025)

- Taught difficult concepts in calculus, increasing quiz grades & receiving extremely high student evaluations.
- Engaged with students one-on-one during office hours, wrote extra resources, and planned exam review sessions.

Project SYNCERE

Evanston, IL

Data Science Intern

(June 2024 – September 2024)

- Coordinated with team to program data cleaning & interactive data dashboards for non-profit benefiting students in STEM.
- Implemented dashboards with org to give demographic & financial data insights and increase participation and donations.

Teaching Assistant in Data Science

Evanston, IL

Information Management for Data Science

(March 2024 – June 2024)

- Improved student understanding in Python and SQL through office hours and graded collaboratively with other TAs.