

NOLAN CHILES

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EDUCATION

Fordham University, Rose Hill College

B.S., Integrative Neuroscience, Anticipated with Honors May 2023

Religious Studies Minor

GPA: 4.00/4.00

GRANTS, HONORS, & SCHOLARSHIPS

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| 2023 | Valedictorian, Fordham College at Rose Hill |
| 2022-2023 | Chapter President, Alpha Sigma Nu, International Jesuit Honor Society |
| 2023 | Atlantic 10 Conference Indoor Track Mile Finalist |
| 2019-present | Full Tuition Academic Scholarship, Fordham University |
| 2019-2023 | Atlantic 10 Conference Commissioner's Honor Roll |
| 2020- present | Honors Concentrator, American Catholic Studies |
| 2019-present | Dean's List |

RESEARCH EXPERIENCE

Fordham University Chemistry Department

Independent Undergraduate Researcher

Mentor: Joshua Schrier, PhD

Bronx, New York

Sept 2020-Present

- Led an original research project to produce a novel classification algorithm for applications in pharmaceutical drug discovery and anomaly detection
- Developed a locality- and novelty-sensitive Bloom filter classifier inspired by the olfactory neural circuitry of *Drosophila melanogaster* as an alternative to traditional machine learning algorithms
- Gathered original results supporting the classifier's potential utility in the fields of drug discovery and anomaly detection due to its high prediction accuracy under restrictive data environments
- Independently learned to work proficiently in Wolfram Mathematica, Python, and R coding languages
- Presented at 2 regional conferences, 3 local symposia, and anticipate two additional conferences this spring
- Compiled and submitted a final transcript for review and publication to JCIM titled, "Biologically Inspired Neural Networks for Molecular Classification"
- Presentations: 67th ACS Regional Undergraduate Symposium (oral), 2021 ACS COMP Undergraduate Research Symposium (poster), 2021 & 2022 Fordham Undergraduate Research Symposia (poster), Neuroscience Capstone Presentation (oral)
- Anticipated Presentations: 2023 Fordham Data Science Symposium: Doing Good with Data (oral), 2023 Fordham Undergraduate Research Symposium (oral)

Fordham Vision and Memory Lab

Research Assistant

Supervisors: Elissa Aminoff, PhD; Daniel Leeds, PhD

Bronx, New York

Aug 2022-Dec 2022

- Assisted in exploiting the representational transparency of convolutional neural networks to reveal information about human vision and visual object recognition.
- Cleaned and expanded image database containing labeled scenes and objects and reformatted to be read by easily interpreted by neural networks
- Reviewed and edited Python code to streamline data collection while accounting for nuances in training data such as confounds.
- Began data collection from each layer of neural networks trained to classify scenes and objects, identifying evidence to justify the greater perceived similarity between an object and its associated visual environment compared with an object and an irrelevant visual environment

CAMPUS INVOLVEMENT & AWARDS

Alpha Sigma Nu, International Jesuit Honor Society

Chapter President

Bronx, New York

Fall 2022-Present

- Responsible for leading weekly Executive Board meetings, attending monthly Zoom calls between chapter presidents internationally, creating long-term goals for ASN, providing updates to the central ASN organization, and leading campus programs

Fordham University Men's Cross Country/Track and Field Teams

Team Member

Bronx, New York

Fall 2019- present

- Recruited to represent and compete for a highly competitive Division 1 running program, participating in 20+ hours/week of practices and competitions through three competitive seasons lasting the entire academic year

EMS, Fordham University

Volunteer Emergency Medical Technician

Bronx, New York

Fall 2019- present

- NYS-certified EMT, taking 12-hour shifts during which I am responsible for responding to emergency calls within the University, addressing immediate medical needs, and transporting to nearby medical facilities if necessary

Fordham University Faculty Advisor Student Assistant

Nominated Member

Bronx, New York

Aug 2021-May 2023

- Worked alongside faculty as a student contact for first year pre-medical students. Led presentations of student-oriented information as they navigated class scheduling, study habits, and locating on-campus services. Provided personal habits and memories from my own struggles through the same process of transition

WORK EXPERIENCE

Platinum Edge Tutoring

Eighth Grade Tutor

Bronx, New York

Aug 2021-May 2022

- Led an SHSAT review course for local eighth graders, created original content, and led group review twice per week as part of Breakthrough NY, a nonprofit aimed at providing additional education opportunities to talented students from disadvantaged backgrounds.

Fordham University Health Center*COVID-19 Testing Administrator***Bronx, New York***Aug 2021-May 2022*

- Admitted students and staff for testing, updated personal information, and administered tests to Fordham students, faculty, and staff at the height of the pandemic

PROFESSIONAL AFFILIATIONS**Alpha Sigma Nu, The Jesuit Honor Society***2021- present***Sigma Xi, The Scientific Research Honor Society***2020- present***Phi Kappa Phi Honor Society***2023-present***PROFESSIONAL REFERENCES**

Joshua Schrier, PhD

Chair Professor, Chemistry Department

Fordham University

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Elissa Aminoff, PhD

Assistant Professor, Department of Psychology

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Daniel Leeds, PhD

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