

# LANE FITZSIMMONS

## Medical Student

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## RESEARCH EXPERIENCE

### Research Fellow at Renaissance School of Medicine

#### Side Effect Insights and the Informal Wisdom of Online Communities

📅 June 2024 - current

📍 Stony Brook, NY

- Used large-scale user-generated data to explore patterns in medication effects and patient experience.
- Funded by Stony Brook University Berken Award and Amazon Cloud Computing Research Grant

### Research Intern at Gaslini Children's Hospital

#### Diagnostic Cytogenetics and Molecular Genetics

📅 June 2024 - September 2024

📍 Genoa, Italy

- Contributed to all stages of the genetic workflow, including wet lab diagnostic sequencing, computational biology analysis, and clinical care. Affiliated with the Undiagnosed Disease Network International.

### Research Associate Harvard Medical School

#### Epilepsy Genetics in the Undiagnosed Disease Network

📅 June 2022 - December 2023

📍 Boston, MA

- Analyzed genotype and phenotype biobank data to better understand the biological pathways leading to seizures in undiagnosed patients.

#### Parkinson's Disease Progression

📅 September 2022 - June 2023

📍 Boston, MA

- Characterized Parkinson's Disease in terms of symptom progression and health resource utilization. Visualized aggregated output from large language model extraction of electronic health record datasets.

### Research Fellow Cincinnati Children's Hospital

#### Endometriosis Detection

📅 June 2022 - September 2022

📍 Cincinnati, OH

- Focused on women's health and dataset diversity in the setting of applied machine learning.

## CLERKSHIPS

- **Surgery:** Neurosurgery, Pediatrics, Urology, General
- **Obstetrics:** Labor and Delivery, Maternal-Fetal Medicine
- **Gynecology:** Gynecological Surgery, Outpatient
- **Pediatrics:** Infectious Disease, Heme/Onc, Inpatient, Primary Care
- **Psychiatry:** Inpatient, Consult, Outpatient
- **Neurology:** Pediatrics, Consult, Inpatient, Neuromuscular Clinic
- **Medicine:** Gastroenterology, Infectious Disease, Inpatient General
- **Primary Care:** VA Hospital Women's Clinic
- **Radiology, Anesthesiology, Emergency Medicine**

## SERVICE

- Stony Brook Free Clinic, Flu Crew (Current)
- Victor Turkey Trot Charity 5K, Founder (Current)
- Genetics Interest Group, Vice President (2024-2025)
- Rafael Hernandez After School Teacher (2022-2023)
- Emergency Medical Technician (2020-2022)

## EDUCATION

### Renaissance School of Medicine

#### M.D. Candidate

📅 August 2023 - May 2027

### Cornell University

#### B.S. Biology and B.S. Information Science

📅 August 2018 - May 2022

GPA: 3.92

## PUBLICATIONS

- Fitzsimmons et al. (2025) Enriched phenotypes in rare variant carriers suggest pathogenic mechanisms in rare disease patients. *BioData Mining*
- Beaulieu-Jones et al (2024) Disease progression strikingly differs in research and real-world Parkinson's populations. *Nature Parkinson's Disease*.
- Conteduca et al (2024) Impact of NSD1 alternative transcripts in actin filament formation and cellular division pathways.
- [In Progress] Fitzsimmons et al. Characterizing Parkinson's Disease in terms of progression likelihood and healthcare utilization.
- Fitzsimmons L, Dewan M, Dexheimer JW. (2022) Diversity in Machine Learning: A Systematic Review of Text-Based Diagnostic Applications. *Applied Clinical Informatics*.

## PRESENTATIONS

### Neuropsychiatric Sequelae of AIDS

#### Stony Brook Psychiatry Case Conference

📅 July 2025

### Fundoplication in ATR-X [Poster]

#### Stony Brook Women in Medicine

📅 March 2025

### Side Effects and The Informal Wisdom of Online Communities

#### Scholarly Concentrations Symposium

📅 August 2024

### UDN Epilepsy and Rare Variants

#### UDN Coordinating Center Meeting

📅 September 2022

### Diversity in Diagnostic Algorithms

#### Cornell Biomedical Informatics Symposium

📅 May 2022