

Lina Florez

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WORK EXPERIENCE

University of Pittsburgh

Aug. 2020 – Present

Physics Graduate Student Researcher

Pittsburgh, PA

- Convolved and interpolated multi-dimensional observations of nearby galaxies to emulate observations of similar objects in the very distant universe.
- Prepared routine summaries to discuss weekly progress, receive feedback, and consult on ways to improve analyses in both one-on-one and group settings.
- Worked as a teaching assistant for over 300 students leading several weekly discussion sections and office hours. Prepared weekly teaching materials and solutions, and graded assignments

Undergraduate Researcher

Princeton University

June 2017 - May 2020

University of Illinois at Urbana-Champaign

June 2015 - May 2020

University of Texas at Austin

June 2019 - Aug. 2019

- Optimized the merging and analysis of two astrophysical databases using pandas and SQL to explore quantitative correlations between the visible and X-ray properties of black holes.
- Used principal components analysis (PCA) to model sky emission features and optimize foreground removal algorithms.
- Performed a temporal analysis of the gravitational orbit of a star to detect and characterize its unseen companion
- Coordinated science outreach for Cena y Ciencias, a K-5 program created to increase science accessibility for underrepresented students, by working with UIUC professors and community professionals across several scientific disciplines to develop educational activities for students.
- Created dual-language (English and Spanish) flyers for families, activity worksheets for students, and instructional pages to discuss with volunteers, alongside preparing and organizing events.

EDUCATION

University of Pittsburgh

Aug. 2020 – Present

M.S. Physics (Expected: April 2023)

Pittsburgh, PA

University of Illinois

Aug. 2016 - May 2020

B.S. Astronomy, Physics Minor

Urbana-Champaign, IL

SKILLS & INTERESTS

- **Programming Languages:** Python, MySQL/SQL
- **Natural Languages:** Spanish (fluent), English (fluent)
- **Packages / Tools:** Numpy, Pandas, Matplotlib, bash, Scipy, Jupyter, scikit-learn, git
- **Technical Skills:** Statistical Analysis, Machine Learning, Data Visualization, Data Mining
- **Interests:** Machine Learning, Deep Learning, dog training, reading