

Jana Grcevich, PhD

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Work Experience

Researcher & Outreach Coordinator, Columbia University, New York, NY Oct 2018 - Dec 2021

- Advised an undergraduate project comparing the number of satellite galaxies containing neutral hydrogen gas in large-scale hydrodynamic simulations to that observed by telescopes
- Created a catalog of Local Group galaxy characteristics and advised students on two projects exploring and predicting the gas content of galaxies using machine learning techniques
- Effectively managed and ran events and educational programs for the public and in schools

Adjunct Instructor, Cooper Union/City College of NY, New York, NY Sept 2018 - June 2020

- Developed 20 randomized & autograded astronomy labs in PHP/MyOpenMath/Jupyter

Data Scientist, Schireson Associates, New York, NY April 2017 - June 2018

- Led post-air analysis for machine learning-based television advertising campaigns, developed and maintained the analysis codebase in Python/SQL and automated Powerpoint generation
- Summarized statistics on television advertising campaign effectiveness based on Nielsen and Comscore defined target audiences, communicated results to national media clients weekly
- Improved monte-carlo simulations used to price television advertising campaigns

Data Science Fellow, Insight Data Science, New York, NY Jan 2017 - Mar 2017

- Created Dupe Snoop, a method using Natural Language Processing (NLP) techniques in Python to accurately classify rephrased but identical question pairs from the Quora website

Postdoctoral Fellow, Amer. Museum of Natural History, New York, NY Jan 2013 - Oct 2016

- Ran and analyzed hydrodynamic simulations written in Fortran and run on high performance (parallelized) computing systems to study interstellar gas loss and evolution of dwarf galaxies
- Discovered two new local galaxies by cross-correlating observational data sources

Graduate Research Fellow, Columbia University, New York, NY Jan 2009 - Oct 2013

- Created a catalog and calculated the characteristics of isolated neutral hydrogen gas clouds and previously unidentified dwarf galaxy candidates using a custom machine vision algorithm
- Ran a suite of Fortran simulations to quantify gas loss in dwarf galaxies as they orbit
- Conducted and characterized radio telescope observations of gas in dwarf galaxies

Education

Ph.D., Astrophysics, Columbia University, New York, NY Feb 2013

M.S., Astronomy, University of Michigan, Ann Arbor Jan 2009

B.S., Physics, Astrophysics, and Mathematics, University of Wisconsin, Madison May 2005

Skills & Competencies: Data Science, Data Visualization, Predictive Analysis, Statistical Data Analysis, Machine Learning (Supervised, Unsupervised, Clustering, Regression, Classification, Deep Learning, Natural Language Processing), AI, LLMs, Python (Pandas, Numpy, scikit-learn, Matplotlib), Git, Database Management (SQL, Redshift, Amazon S3), Microsoft Office, Teaching, Public Speaking