

# Matthew Shannon

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## Summary

I am an astrophysicist and scientific researcher at NASA with 7 years experience analyzing and interpreting scientific datasets, communicating key results to audiences, and working in a team environment. I program primarily in Python, utilizing statistical and machine learning methods, with additional skills in IDL, R, LaTeX and BASH. I am looking to transition into a more practical data-driven role, wherein I can utilize my love for learning and problem solving in real-world applications.

## Education

### Ph.D. Astronomy

WESTERN UNIVERSITY

Ontario, Canada

2012 - 2016

Awards: (x4) Queen Elizabeth II Graduate Scholarship in Science and Technology; Graduate Student Teaching Award

### M.Sc. Astronomy

WESTERN UNIVERSITY

Ontario, Canada

2011 - 2012

Awards: Queen Elizabeth II Graduate Scholarship in Science and Technology

### B.Sc. Honours Physics and Astronomy

UNIVERSITY OF VICTORIA

British Columbia, Canada

2007 - 2011

Awards: Miranda Ward Physics Scholarship; Don Ingham Memorial Scholarship; Physics and Astronomy Co-op Student of the Year

## Work Experience

### NASA/Universities Space Research Association

NASA POSTDOCTORAL PROGRAM FELLOW

Moffett Field, CA

2017 - PRESENT

- Responsible for helping further the development, exposure and scientific utility of a high-profile NASA database.
- Co-developed and presented an astronomical Python software tool at the SciPy 2018 conference in Texas, in the form of a peer-reviewed conference proceeding and a technical poster.
- Prepared two scientific articles for publication through collaboration with a team of seven local and international scientists.
- Attended a two-week statistical/computer learning workshop at Penn State, providing the foundation for a new machine learning project currently in progress.

### Western University

POSTGRADUATE RESEARCH ASSISTANT

Ontario, Canada

2016 - 2017

- Worked with a diverse team of junior and senior scientists, both domestic and international, leading to the publication of a scientific article.

### Western University

GRADUATE STUDENT: RESEARCH & TEACHING

Ontario, Canada

2011 - 2016

- Presented my scientific research at five international conferences (three talks, four posters).
- Performed public outreach at five all-ages University events, including two talks.
- Assisted hundreds of undergraduate students as a teaching assistant (nine classes over five years).
- Published three scientific articles in peer-reviewed journals.
- Was awarded desirable observing time on the Subaru Telescope in Hawaii and the NASA airborne science platform in California.

## Skills

<b>Data analysis</b>	Quantitative/statistical analysis of multidimensional datasets, fitting/decomposition, visualization, problem solving
<b>Programming</b>	<b>Python</b> (Numpy, Scipy, Pandas, Matplotlib, Jupyter Notebook, TensorFlow, Keras, scikit-learn, iPython, Seaborn, Travis), <b>IDL, LaTeX, BASH, R, SQL</b>
<b>Software</b>	OS X, Windows, Linux, Conda, Git/GitHub, Overleaf, Office, Illustrator, Sublime Text
<b>Writing</b>	I have authored (4) and refereed (1) publications in peer-reviewed scientific journals.
<b>Management</b>	Proficient at planning, prioritizing work; emphasis on breaking down long-term goals into tractable tasks; able to work on unsupervised projects through personal initiative, and as part of a team.
<b>Communication</b>	As a teaching assistant for nine undergraduate physics and astronomy courses, I have taught, tutored and assisted hundreds of students. I have presented science concepts to the general public at five outreach events, in addition to nine academic presentations at five international conferences.
<b>Collaboration</b>	I frequently work with research groups, both small and large, domestic and international, to find ways to best work towards common goals, utilizing our individual strengths.