





Nicholas Saunders

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EDUCATION	University of Washington, Seattle, WA Sept 2013 – Jun 2018 — B.S. Astronomy and Comprehensive Physics – <i>Honors in Astronomy</i> — B.A. Comparative Literature: Cinema Studies — Astronomy GPA: 3.7/4.0 — Comparative Literature GPA: 3.9/4.0
RELEVANT SKILLS	Data reduction and photometric analysis using IRAF/PyRAF; programming with python, bash, java, LaTeX; public presentation of astronomy and physics
RESEARCH EXPERIENCE	Research Support Scientist, <i>Kepler/K2</i> Guest Observer Office Aug 2018 – NASA Ames Research Center, Mountain View, CA — Developing and maintaining open source community software to assist with the analysis of <i>Kepler/K2</i> spacecraft data Detection of Transiting Exoplanets, Student Researcher Jan 2016 – Aug 2018 University of Washington, Seattle, WA – <i>advisors: Rory Barnes, Rodrigo Luger</i> — Simulated a forward model of CCD detectors, developed python code to reduce instrumental noise for <i>Kepler/K2</i> photometry and exoplanet transit detection LSST Citizen Science, Student Researcher Jun 2017 – Aug 2018 University of Washington, Seattle, WA – <i>advisor: Andrew Connolly</i> — Created an online project interface to identify and characterize transient objects in LSST data using Zooniverse citizen science web portal Planetary Science Intern Apr 2011 – Jun 2013 The Bear Fight Institute, Winthrop, WA – <i>advisors: Tom McCord, Bernard Nordmann</i> — Generated mosaicked satellite imagery maps for surface of Mars and the Moon; analyzed composition of the Moon's surface using reflectance spectroscopy
ACADEMIC EMPLOYMENT	Data Visualization Analyst Jun 2018 – Aug 2018 University of Washington, Seattle, WA — Used Tableau to create visualizations that demonstrate elementary & high school student learning as part of UW Astrobiology Mobile Planetarium outreach Teaching Assistant, Astronomy Department Mar 2018 – Jun 2018 University of Washington, Seattle, WA — Led multiple weekly in-class sections, taught intro astronomy material, collaborated with team of T.A.s and professor, assist students in lab assignments Planetarium Organizer Jan 2018 – Aug 2018 University of Washington, Seattle, WA — Scheduled planetarium presentations, managed ticket sales and social media Student Assistant, Astronomy Department Jan 2017 – Mar 2018 University of Washington, Seattle, WA — Graded assignments for multiple upper-division astronomy courses, led planetarium presentations for students
PUBLICATIONS	N. Saunders, R. Luger, R. Barnes, (2018, in progress) <i>Simulated CCD Photometry: Low Pointing-Precision K2 Observations.</i>

	A. Mahabal, U. Rebbapragada, R. Walters, F. Masci et al. (including N. Saunders), (2018, in progress) <i>Machine Learning for the Zwicky Transient Facility</i> .	
	R. Luger, E. Kruse, D. Foreman-Mackey, E. Agol, N. Saunders (2017) <i>An Update to the EVEREST K2 Pipeline: Short Cadence, Saturated Stars, and Kepler-like Photometry down to $K_p = 15$</i> . arXiv:1702.05488	
TALKS	Kepler/K2 Science Office, NASA Ames , Mountain View, CA	31 May 2018
	— N. Saunders, “Simulated CCD Photometry: An Application for <i>K2</i> Sputtering”	
	Astronomy on Tap , Seattle, WA	25 Apr 2018
	— N. Saunders, “Putting the Science in Science Fiction”	
	231st American Astronomical Society Meeting , Washington DC	12 Jan 2018
	— N. Saunders, R. Luger, “De-Trending <i>K2</i> Exoplanet Targets for High Spacecraft Motion”	
	Astrobiology Mini Talks, Museum of Flight , Seattle, WA	14 Oct 2017
	— N. Saunders, “The Search for Habitable Worlds”	
	Kepler/K2 Guest Observer Office, NASA Ames , Mountain View, CA	12 Oct 2017
	— N. Saunders, R. Luger, “Sputtering Effects on <i>K2</i> Systematics Removal”	
	UW Undergraduate Research Symposium , Seattle, WA	19 May 2017
	— N. Saunders, “Effects of Pixel Sensitivity Variation on <i>K2</i> Exoplanet Detection”	
	Washington NASA Space Grant Orientation , Seattle, WA	Apr 2015 – Apr 2017
	— Presented research and led planetarium shows for prospective UW students	
AWARDS	UW Astronomy Department “Kudos of the Quarter”	Feb 2018
	Washington Newspaper Publishers Association	Oct 2016
	— 1 st Place: Best Video — 1 st Place: Best Online Photo Essay	
	Washington NASA Space Grant Scholarship	Sept 2013
	Irving and Louise Donnergaard Endowment	Sept 2013
OBSERVING EXPERIENCE	Manastash Ridge Observatory , Ellensburg, WA	July 2016
	Observed 10 full nights on 0.75m telescope, completed multi-band optical photometry and imaging, reduction and analysis with IRAF and python	
SERVICE & OUTREACH	Volunteer Presenter, Astrobiology Mobile Planetarium	Mar 2018
	— Presented planetarium shows with UW's inflatable dome to rural schools in WA to introduce the study of astrobiology	
	Undergraduate Liaison, UW Astronomy Faculty Board	Sept 2017 – Aug 2018
	— Attended faculty meetings, reported undergraduate concerns, communicated with both faculty and students	
	Volunteer, Total Solar Eclipse NASA Outreach Event	Aug 2017
	— Organized educational outreach activities at a middle school on the Warm Springs Reservation, OR, assembled and managed telescopes for solar and planetary observation	
	Volunteer Organizer, Astronomy on Tap Seattle	Jan 2017 – Oct 2017
	— Assisted with setup and organization of astronomy outreach event	
	Volunteer Presenter, UW Planetarium	Nov 2015 – Aug 2018
	— Performed multiple shows each month for public and private audiences	
RELEVANT COURSEWORK	Introduction to Astrostatistics and Big Data in Astronomy Introduction to Astronomical Observation Introduction to Astronomical Data Analysis Introduction to Programming for Astronomical Applications Writing Scientific Papers Advanced Astronomy Courses: Solar System, Stars, Galaxies, Cosmology	

GROUPS	Pulsar Kicks, UW Intramural Soccer	Mar 2017 – Jun 2017
	UW League of Astronomers	Jan 2017 – Jun 2018
	SPACE (Students Pursuing Academic and Celestial Exploration)	Nov 2016 – Jun 2018
	Washington NASA Space Grant Consortium	Sept 2013 – Jun 2018
OTHER EMPLOYMENT	Barista – Tea Republik, Seattle, WA	May 2015 – Mar 2017
	Busser – Sun Mountain Lodge, Winthrop, WA	Sept 2012 – Aug 2013
	Swim Instructor and Lifeguard – Wagner Pool, Twisp, WA	Jun 2010 – Aug 2012