Alison Mansheim

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SKILLS Python (pandas, numpy, scipy, scikit), SQL, Unix/Linux, C, IDL

EXPERIENCE

Insight Data Science — **January 2018 - Present**
Data Science Fellow — *Palo Alto, CA*

- Consulted for an early-stage "AI Powered" start-up to provide actionable insights on how to leverage analytics and machine learning
- Delivered data-driven recommendations and UX solutions to remove bias from profile questions and current method for model validation
- Evaluated the features for their current recommender system using a Random Forest model (in **Python**), which revealed user behavior that challenged their initial assumptions
- Communicated solutions to non-technical founder, which were immediately approved

University of California, Davis — **2009-2016**
Physics Doctoral Research and Teaching Fellow — *Davis, CA*

- Constructed a pipeline (in **Python** and **SQL**) to clean, wrangle, combine and visualize data from multiple data sets (including *The Hubble Space Telescope*) that successfully extracted signal from >100,000 noisy sources
- Owned the statistical analysis (Monte Carlo, bootstrap, KS test, regression) that resulted in two, first-author publications in peer-reviewed scientific journals
- Assisted in teaching over 18 quarters of physics and astronomy university courses
- Co-authored the proposal (10% acceptance rate) and conducted observations of hundreds of faint galaxies on the world's second largest optical telescope (*Keck*)
- Ruled out the hypothesis of a massive burst of star formation using models of galaxy evolution in cluster mergers for the Merging Cluster Collaboration (*Mansheim et. al 2017a*)
- Discovered a statistically significant suppression of star formation using models of dark matter in cluster mergers in collaboration with Observations of Redshift Evolution in Large Scale Environments Survey (*Mansheim et. al 2017b*)

San Francisco State University — **2006-2009**
Physics MS Research Fellow — *San Francisco, California*

- Created a model (in **C**) of dark matter in cluster cores that recovered parameters with 95% confidence and enabled comparison of theoretical models with observations (χ^2 test)

National Radio Astronomy Observatory — **2005-2006**
Research Intern — *Charlottesville, Virginia*

- Created a module (in **Python**) that removed radio interference from pulsar data
- Detected pulsar emission signal using the world's largest maneuverable and stationary single-dish radio telescopes in Greenbank, WV and Arecibo, Puerto Rico

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EDUCATION

PhD Physics, University of California – Davis — **2016**
MS Physics, San Francisco State University — **2009**
BA Astrophysics, University of Virginia — **2005**