

# Daniel Ryan Furman

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## SKILLS

**Programming:** Proficient in Python (e.g., Numpy, Pandas, Scikit-Learn, Pytorch, Flask), R, MATLAB  
**Version Control/Databases:** GIT, GitHub, Anaconda, Docker, SQL (e.g., SQLite, MySQL, PostgreSQL)  
**Writing:** Published 4 papers at scientific research venues and numerous technical design docs  
**Cloud:** Growing knowledge of GCP and AWS tools for data science and software development

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## EXPERIENCE

**Nov 2021 - Present Understory.AI - Data Scientist** Mountain View, CA

- **Machine Learning Intern**

- Supported the Software Development & Engineering team by building and deploying image segmentation modules for land management applications with remote sensing drone imagery. [\[Link\]](#)
- Delivered MVP in 6 months that is easily applicable to new clients and use-cases, developed demo by deploying 4 segmentation models for inference over 10+ scenes (>80% balanced accuracy).
- Dev tasks: Validated and managed 100+ GB imagery in GCP, collaborated on a scalable and robust ML module in Python for supervised learning of vegetation layers in drone imagery with patch-based logistic regressors and U-Nets, applied MATLAB texture synthesis packages to generate synthetic training data (10k's of obs.), developed a hierarchical label search module for 1:1 label to pixel mapping in Python, took leadership over writing technical docs for code and project design.

**Summer 2019 Harvey Mudd College - Data Science Researcher** Claremont, CA

- Won an NSF grant to build communicable forecasts of climate impacts in CA, by building classifiers in R and Python of species distributions to forecast and visualize shifts (19 feats., ~7k obs.). [\[DataViz\]](#)
- Built and open-sourced a module [\[PySDMs\]](#) for AutoML geo-classification fit via block cross-validation, multi-seed/sample blending, and model search (Catboost, Logistic Regression, etc.), with AUCs>0.95.

**Mar 2019 - Present Contract/Freelance - Data Science Consultant** Remote (USA)

- Strategized re-structuring recommendations with **De Castro, West Inc.** for a real estate partnership shifting 11 unevenly shared assets into 3 majority ownerships by building a search algorithm to minimize value and debt stake change, optimal state exhibited <2% change against ~\$159mm. [\[Blog\]](#)
  - Extracted advanced analytics insights for the **Official World Golf Rankings Ltd.** from over two decades of professional golf tournament data across 21 tours by developing PCA biplots and refining written deliverables, convincing stake-holders to ship updates in Q3 '22 to boost the system's fairness.
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## EDUCATION

**Anticipated May 2023 University of California, Berkeley, School of Information** Berkeley, CA  
**Master of Information Management and Systems**

**Specialization:** Machine Learning | Graduate Certificate in Applied Data Science

**Teaching:** TA for Data Mining @ Berkeley Haas (MBA247.11, Fall 2021) [\[Syllabus\]](#)

**Graduated May 2020 University of Pennsylvania, College of Arts and Sciences** Philadelphia, PA  
**Bachelor of Arts with Distinction in Earth Science**

**Minor:** Mathematics • **Cum. GPA:** 3.79/4.0 • NCAA D1 Golf • Experimental Geophysics Lab

**Honors:** Rose Research Award [\[Paper\]](#), NSF Award #1757952 [\[Poster\]](#), CURF Grant [\[Write-Up\]](#)