

# 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, numerous code & project documentations

**Cloud:** Growing knowledge of GCP & 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 team by building and deploying computer vision segmentation models for next-gen land management applications with remote sensing drone imagery. [\[Link\]](#)
- Delivered an MVP in 6 months that is reproducible to new clients/use-cases, developed demo by deploying 4 segmentation models for inference over 10+ scenes (>80% balanced accuracy).
- Validated & managed 100+ GB imagery in GCP, developed a hierarchical label search module for 1:1 label to pixel mapping, collaborated on scalable & accurate instance segmentation models (patch-based logistic regressors, U-Nets), applied texture synthesis packages to generate 1000s of synthetic training patches, wrote communicable documentation & structured software with agile practices.

**Summer 2019 Harvey Mudd College - Data Science Researcher**

Claremont, CA

- Won an NSF grant to design communicable modeling visualizations of climate impacts forecasted by machine learning classifiers of California species distributions (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 & 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 • **Cumulative GPA:** 3.79/4.0

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

**Activities:** NCAA D1 Golf Team • Experimental Geophysics Lab