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 team by building an automated machine learning software (AutoML) for supervised image segmentation modeling with land management data. [Link]
  - Delivered MVP in 6 months that is easily portable to new projects, developed a software demo by deploying 4 semantic segmentation models over 10 scenes (hitting >80% balanced accuracy target).
  - Validated and managed 100s GB of geospatial data in GCP, researched and designed patch-based logistic regression and U-Net models in Python, generated synthetic data with texture synthesis packages in MATLAB and integrated them into training pipelines, developed hierarchical search functions for 1:1 label to pixel mapping in Python, took leadership over code and project docs.

Summer 2019   Harvey Mudd College - *Data Science Researcher* Claremont, CA
- Won an NSF grant to build classifiers of species distributions in R and Python to forecast and visualize climate impact shifts across California (19 features, ~7000 observations, AUCs>0.95). [DataViz]
- Built and open-sourced a Python module [PySDMs] for AutoML geo-classification fit via block cross-validation, multi-seed/sample blending, and model search (Catboost, XGBoost, Logistic Regression).

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.

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]