Daniel Ryan Furman

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LinkedIn | GitHub | Portfolio

A challenge-driven learner passionate about data science and software development. "More data beats better models, better data beats more data, and eighty percent of the outcomes result from twenty percent of the inputs."

EDUCATION

University of California, Berkeley   Berkeley, CA
Master of Information Management and Systems   Expected May 2023

University of Pennsylvania   Philadelphia, PA
Bachelor of Arts in Environmental Science and Mathematics   May 2020
Cumulative GPA: 3.79 / 4.00 (Magna Cum Laude)
- Honors: Rose Undergraduate Research Award ('20); NSF Award #1757952 ('19); CURF Research Grants ('18)
- Relevant Coursework: Numerical Mathematics, Computational Linear Algebra, Machine Learning, Data Analytics, Data Mining for Big Data, Modeling Geographic Space, Biostatistics, Game Theory, Calculus I – III

PROJECT & RESEARCH EXPERIENCE

Data Science Researcher | Harvey Mudd College | *Claremont, CA* | Code   May 2019 – Jan 2021
- Pioneered geospatial ML frameworks for species conservation in the Mojave Desert, built highly predictive distribution models with climatological features through soft voting best subset selection (AUCs > 0.95).

Geophysics Researcher | UPenn Ice Physics Lab | *Philadelphia, PA* | Code   Sep 2017 – May 2020
- Spearheaded experimental geophysics project probing large-scale ice sheet processes, discovered grain size sensitive flow mechanisms for natural ice densification as explored in my award-winning senior thesis.

Data Science Consultant | Official World Golf Rankings | *Remote*   Mar – May 2019
- Investigated fairness of the ranking system through unsupervised learning techniques, discovered persistent tour-based biases as well as extensive errors throughout the company's aged and poorly schemed databases.

Statistics Researcher | James Cook University | *Townsville, Australia*   Aug – Dec 2018
- Analyzed bird assemblage abundance and species richness patterns across the Australian Wet Tropics, built random forest regressors on geospatial and temporal subgroups of decades-worth of ecological survey data.

Strategy Intern | Wildlife Works | *San Francisco, CA & Indonesia*   May – August 2017
- Conducted feasibility report profiling a REDD+ carbon-credit investment in East Kalimantan, Indonesia, found gaps in the project's proposed socio-economic impact for the underserved local communities.

SKILLS & PUBLICATIONS

Overview: Creative hypothesis designer, effective team leader and collaborator, detail-oriented problem solver

Programming: Python (numpy, matplotlib, scipy, scikit-learn, pytorch, pandas), R, C++, MATLAB, Shell/terminal

Conference Proceedings: (1) DR Furman, SK Halvorsen, and SC Adolph: *Society for Integrative and Comparative Biology Meeting* (SICB), Jan 3, 2021. (2) DR Furman and SK Halvorsen: *SCCUR Meeting*, Nov 23, 2019.

VOLUNTEERING & INTERESTS

- Teaching Volunteer with Philadelphia Water and the Cook-Wissahickon School ('16-17, 3 hours per week)
- Volunteer with Star Paws Rescue ('13-16, 4 hours bi-weekly) and Marine Mammal Center ('16, 5K run)
- UPenn environmental community, e.g., Penn Sustainability Review: "The Indirect Hand of Man" ('17)
- UPenn Sigma Alpha Mu (two-time brotherhood chair, '17-18 and '19-20)
- UPenn D1 Varsity Golf Team ('16-17), Captain at the Harvard Westlake School Golf Team ('15-16)
- Certified PADI Rescue Scuba Diver with AQF CPR, First Aid, and O_2 training ('19)
- Reads: Everybody Lies, Universal: A Guide to the Cosmos, Sapiens, Seven Brief Lessons on Physics
- Hobbies: surfing, playing guitar, rock climbing, backpacking, and OSS development (see my PyPi)