Daniel Ryan Furman

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A challenge-driven scientific researcher and data scientist interested in energy systems and green technology

EDUCATION

University of Pennsylvania May 2020
Bachelor of Arts; Magna Cum Laude *Philadelphia, PA*
Major: Earth Science with Distinction, **Minor:** Mathematics
Cumulative GPA: 3.79 / 4.00, **Major & Minor GPA:** 3.82 / 4.00
Awards: Penn Rose Undergraduate Research Award (‘20); NSF Data Science Award #1757952 (‘19); SICB Poster (‘21); SCCUR Presenter (‘19); Penn CURF Sustainability Grant (‘18); Penn EES Hayden Scholars Grant (‘18)
Coursework: Numerical Mathematics, Computational Linear Algebra, Machine Learning, Data Analysis in Earth Science, Statistical Data Mining for Big Data, Modeling Geographic Space, Statistics for Biologists, Calculus I – III
Semester Abroad: James Cook University, Queensland, Australia (with research in AWT ecological modeling)

PROFESSIONAL EXPERIENCE

Data Science Researcher | Harvey Mudd (NSF #1757952) | *Claremont, CA* | Code May 2019 – present

- Pioneers geographic modeling frameworks for CA desert conservation (link: SICB ‘21, use Firefox)
- Designs efficient Python/R scripts for geostatistics, data processing, and ensemble classification, corresponding author on forthcoming journal manuscript, contributor to PyImpute (a geo-modeling library)

Geophysics Researcher | Penn Ice Physics Lab (CURF grants) | *Philadelphia, PA* | Code Sep. 2017 – May 2020

- Spearheaded ice physics research with experimentation and Python analyses (CURF project description)
- Published insights into newly discovered ice flow micro-physics in honors senior thesis (Rose Award ‘20)

Data Science Consultant | Official World Golf Rankings (OGWR) | *Completed Remotely* March – May 2019

- Discovered bias towards American tours with categorical PCA biplots, also corrected extensive data errors

Strategy Intern | Wildlife Works Conservation Company | *San Francisco, CA & Indonesia* May – August 2017

- Conducted field and interview investigation of a REDD+ carbon-credit project, finding gaps in the investment’s potential for driving ethical socio-economic impact in the region (Write-up description)

SKILLS & PUBLICATIONS

Skills: Creative hypothesis designer, team leader and collaborator, detail-oriented thinker, adaptable, tenacious

Programming: Python (modeling, recursion, object-orientation), R (geo-sampling, modeling, ETL pipelines), C++ (object-orientation and data structures), MATLAB (numerical math), OCaml (value-orientation), ArcGIS, Zsh/Shell

Publications: DR Furman, SK Halvorsen, and SC Adolph. *Assessing Climate Change Impacts … with Ensemble Species Distribution Models*. Society for Integrative Biology Meeting, 2021. (link: SICB ‘21, use Firefox)

INTERESTS & VOLUNTEERING

- Hobbies include surfing, playing music (guitar, bass, keys), rock climbing, reading, and being outdoors
- Watershed science TA with Philadelphia Water and Cook-Wissahickon School (‘16-17, 3 hours per week)
- Article published in Penn Sustainability Review, “The Indirect Hand of Man” (‘17)
- Volunteer with Star Paws Rescue (‘13-16, 4 hours bi-weekly) and Marine Mammal Center (‘16, 5K run)
- Sigma Alpha Mu (two-time brotherhood chair, ‘17-18 and ‘19-20)
- Member of UPenn Varsity (D1) Golf Team (‘16-17)
- Certified PADI Rescue Scuba Diver with AQF CPR, First Aid, and O_2 training (‘19)