

# Daniel Ryan Furman

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

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## EDUCATION

### University of Pennsylvania

*Bachelor of Arts; Magna Cum Laude*

May 2020

*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 REU #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, Statistical Data Mining for Big Data, Modeling Geographic Space, Data Analysis in Earth Science, Statistics for Biologists, Calculus I – III

**Semester Abroad:** James Cook University, Queensland, Australia (with applied stats research in AWT ecology)

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## PROFESSIONAL EXPERIENCE

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

- Pioneers geographic modeling frameworks for CA desert conservation (use Firefox: [SICB '21 publication](#))
- 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** | UPenn 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](#))
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## SKILLS & PUBLICATIONS

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

**Programming:** Python (physics modelling, recursive & object-oriented programming), R (geo-statistics, modeling, and ETL pipelines), C++, MATLAB (numerical math), OCaml (value-oriented programming), 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).

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## 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<sub>2</sub> training ('19)