DAN KLUSKIEWICZ

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University of Washington	**2015**
M.S. in Geophysics	GPA: 3.94
NSF Graduate Research Fellowship	

Pennsylvania State University, Schreyer Honors College	**2010**
B.S. in Physics and Mathematics	GPA: 3.99
Highest Distinction, Class rank **1** out of **519** (College of Science)	

Languages: Python (incl. Numpy, Matplotlib, Pandas, GeoPandas, and Scikit-Learn), LaTeX, (some R and Matlab)

Skills: Research, Mathematical Modeling, Probability & Statistics, Machine Learning, Data Wrangling, Technical Writing, Data Visualization, Linear Algebra, GIS, Numerical Methods for Differential Equations, Signal Processing, Teaching

Tools: Git, Cloud Computing, Linux, OSX, Windows

Work Experience

Northwest Management, Inc — Moscow, ID (working in Index, WA) **September, 2018 - Present**
   Programmer Statistician

I Lead research and development for a statistical model that predicts individual-tree forest inventory from a combination of field samples and aerial imagery and Lidar. I have:

- Designed and programmed a modeling workflow that organizes terabytes of remote sensing data, performs efficient model experiments in the vicinity of our training (field sample) data, evaluates the performance of an optimized model, and then implements that model across a project.
- Delivered forest inventories and documentation (including validation statistics) for multiple large projects while continuing to refine all components of our modeling workflow.
- Collaborated with foresters and biometricians to design efficient field sampling protocols
- Presented our inventory products and validation data to clients, as well as at multiple conferences domestic and abroad.

Talus Analytics — Boulder, CO **June, 2016 - April, 2018**
   Quantitative Researcher October, 2017 - April, 2018
   Junior Quantitative Researcher June, 2016 - September, 2017

- Developed predictive models for flooding and wildfire spread
  - Researched existing methods and theory
  - Proposed a novel geometric method for probabilistic flood-hazard assessment, and led a collaborative effort to implement it in Python.
  - Implemented a simplified version of an existing static fire model (coded from scratch), and extended it to include time-dependent predictions
- Developed and implemented a wildfire accumulation model that delineates geographic areas based on wildfire hazards and predicts probable maximum losses within them
- Wrote the methods section for a FEMA publication on rapid flood modeling
- Wrote and extensively edited company reports on flood modeling and resilience investments

Publications

- Kluskiewicz, Dan and others. (2017). Sonic methods for measuring crystal orientation fabric in ice, and results from the West Antarctic ice sheet (WAIS) Divide. Journal of Glaciology. 63. 1-15. 10.1017/jog.2017.20.
- Longenecker, Herbert and others. (2019). A Rapid Flood Risk Assessment Method for Response Operations and Non-subject-matter-expert Community Planning. Journal of Flood Risk Management. 13. 10.1111/jfr3.12579.