

LUCIEN SIMPFENDOERFER

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Skills

Languages	Python, SQL, Spark, Unix, Matlab, HTML/CSS, Fortran
Data Analysis	Data cleaning/wrangling, machine learning, geospatial analysis
Other	Scientific communication, technical writing

Experience

- Data Engineering Contractor**, Flux Tailor, New York, NY Feb 2019 - Mar 2019
- Created a Python data processing pipeline to collect, clean, standardize, and merge public data on over 10 million properties in New York and Maryland.
 - Worked extensively with geospatial data analysis libraries: geopandas, shapely, fiona.
- Graduate Research Assistant**, Penn State University Aug 2016 - Aug 2018
- Used ~100 GB of observational and modeling data to study Arctic clouds.
 - Debugged and built on 50,000-line, single-column climate model in Fortran.
 - Wrote Matlab code to process, analyze, and synthesize results from >2000 simulations.
 - Lead author for a scientific publication.
- Hollings Scholar Researcher in Climate Science**, Summer 2016
NOAA Earth System Research Laboratory
- Wrote code to clean, merge, and analyze >500GB of observations from five instruments at two Arctic locations.
 - Received top award for conference presentation.
- Research Intern in Climate Science**, NASA GISS Summers 2014, 2015
- Wrote Python code to evaluate climate model precipitation forecasts over West Africa.
 - Built skills in collaboration, teaching, and communication: led a NYC high school student and science teacher through the entire research and data analysis process.

Education

- The Data Incubator**, New York, NY Apr 2019 - May 2019
- Skills: Scikit-learn, TensorFlow, PySpark, SQL, visualization, web scraping.
 - Capstone project: built a machine learning model to predict violations of air quality standards from EPA records ([web application](#); [documentation](#)). Code is available on [GitHub](#).
- Pennsylvania State University**, *Summa Cum Laude*, GPA 4.0
- MS in Atmospheric Science Aug 2016 - Aug 2018
 - BS in Atmospheric Science Aug 2013 - Aug 2016
- University Centre in Svalbard**, Svalbard, Norway Jan 2016 - Jun 2016
- Research and field experience in the high Arctic

Honors/Awards

- NOAA Hollings Scholarship 2015-2017
- Student Marshall, Penn State College of Earth and Mineral Sciences 2018
- Oral presentation winner, Hollings Symposium 2016