

Hannah Siegel

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[Portfolio](#) | [LinkedIn](#) | [GitHub](#)

SUMMARY

Highly organized spatial data science graduate (June 2026) with expertise in Python programming, Esri GIS tools, and spatial modeling. Experienced in analyzing environmental, land use, and urban planning patterns through remotely sensed data. Passionate about using geospatial analysis to develop solutions for environmental, sustainability, and climate change issues.

EDUCATION

B.S. Data Science, Spatial Data Science – University of Oregon

September 2022 - June 2026

Minors: Geography, Climate Studies

Cumulative GPA 3.93/4.0 – Dean's List all semesters

Relevant Courses: GIScience, Remote Sensing, Machine Learning, R, Data Visualization, Mapping With Drones, Cartography, Python for GIS

PROJECTS

- **Remote Sensing Analysis of Vegetation Burning and Regrowth**

Applied random forest classification and NDVI change detection using Python, QGIS, and ArcGIS Pro to analyze satellite imagery and quantify post-fire vegetation recovery patterns. Designed map visualizations for a deliverable written report.

- **Geospatial Analysis of Walkability in Salem, Oregon**

Conducted geospatial analysis of walkability factors using large spatial datasets. Performed spatial joins and weighted raster analysis using ArcGIS Pro, delivering a report of actionable city planning recommendations.

- **Sustainability and Energy Usage Data Analytics**

Developed predictive models analyzing country-level energy and CO2 emissions data. Performed data preprocessing, exploratory data analysis, inference, and optimization of various machine learning techniques via k-fold cross validation and hyperparameter tuning.

PROFESSIONAL EXPERIENCE

Data Science Intern – The Aerospace Corporation – El Segundo, California

June 2025 - Present

- Developed a scalable Python pipeline to generate a geolocated dataset of wildfire predictors by fusing VIIRS satellite rasters with spatial climate data across various formats and sources
- Verified validity of fused, processed data samples by training a simple segmentation model to predict wildfire spread patterns
- Collaborated effectively using GitHub version control and clear documentation to build a reproducible geospatial data processing workflow, managing the complex project from start to finish

Data Science Learning Assistant – University of Oregon – Eugene, Oregon

September 2024 - June 2025

- Led weekly tutoring sessions in Python, statistics, and data science fundamentals, guiding students through coursework and fostering problem-solving skills

Data Analyst Intern – Helping Irish Hosts – Dublin, Ireland

July 2024 - August 2024

- Cleaned and standardized thousands of contact records, streamlining data imports from Excel/Sheets into HubSpot CRM to match 1,000+ host families with Ukrainian refugees
- Built monthly dashboards with clear data visualizations to optimize customer outreach and engagement strategies

SKILLS

- **Software:** ArcGIS Pro, QGIS, Python (rasterio, shapely, geopandas), ArcPy, R, Agisoft Metashape, Google Earth Engine
- **Spatial Data Analysis:** Database cleaning & management, machine learning, terrain modeling, photogrammetry, raster imagery analysis, spectral analysis, LiDAR processing, georectification, cartographic design
- **Professional:** Problem-solving, collaboration, attention to detail, communication & presentation, leadership, project planning & organization