

Brenna Hatch

brenna.hatch@jpl.nasa.gov • [Brenna Hatch | LinkedIn](#)

Education

University of Montana - Missoula, MT | Department of Geosciences

B.S. Geosciences

2017- 2021

University of Montana - Missoula, MT | Department of Geography

Certificate in GIS Sciences and technologies

2017-2021

Skills

- Python
- RStudio
- Microsoft Office
- Pix4Dmapper
- Pix4Dfields
- Pix4Dmatic
- ArcGIS StoryMaps
- ArcMap
- ArcGIS Pro
- SeaDAS
- ACOLITE
- UAV surveying

Research Experience

NASA DEVELOP Participant | Science Systems and Applications, Inc. (SSAI)

Project Lead Geospatial Researcher | NASA Jet Propulsion Laboratory

June 2022- August 2022

- Worked with 3 researchers on a wildfire project utilizing NASA Earth Observations to understand the Bootleg Fire vegetation moisture, topography, and vegetation structure to create new geospatial layers to be used in wildfire modeling in partnership with Pacific Northwest National Laboratory (PNNL) and United States Forest Service (USFS)
- Used Python to create time series plots and vegetation moisture maps of daily evapotranspiration and evaporative stress index using ECOSTRESS products
- Was project lead and learned management and communication skills

Geospatial Researcher | NASA Jet Propulsion Laboratory

January 2022- April 2022

- Worked with 3 researchers on a water resource project utilizing NASA Earth Observations to understand groundwater recharge in the Mississippi embayment regional aquifer system in a partnership with Protect Our Aquifer (POA)
- Used RStudio to create time series plots and maps of evapotranspiration and precipitation products from Terra MODIS and GPM IMERG
- Gained experience working in a team and individual setting in a virtual environment
- Developed problem solving, technical writing and presentation skills

Geospatial Researcher | Boston, MA Node

September 2021- November 2021

- Worked with 4 researchers on a GIS project focusing on sediment dynamics and turbidity on Fire Island, NY in a partnership with the National Parks Service (NPS)
- Built skills in Python/R programming, statistical analysis, technical writing, and presented the work to the public through presentation, poster, and storymap
- Used ArcGIS Pro, ACOLITE, and SeaDAS to processes and analyze Landsat 5/8, Sentinel-2, and WorldView-2 imagery

Autonomous Aerial Systems Office Intern | Montana Space Grant Consortium | Montana State University

GIS/Remote Sensing Intern | Missoula, Montana

May 2021- July 2021

- Planned UAV flights by selecting the platform and sensor appropriate for the project and terrain
- Processed data in the field (Pix4Dmapper), and in the office (Pix4Dmapper)
- Data analysis of projects using ArcMap and ArcGIS Pro
- Classified 10-layer packages of Aerial Firefighting Use and Effectiveness (AFUE) fire imagery with standardized symbology