Joseph M. Krenzelok

Phone: 406.207.7692 **Email:** Joe.Krenzelok@gmail.com

380 Beaver Lake Rd
Whitefish, MT 59937

EDUCATION

University of Minnesota Twin Cities — **Minneapolis, MN**

Bachelor of Science in Geography: Environmental Systems — **Graduated: May 2015**

Minors in Environmental Geoscience and GIS — **Cumulative GPA: 3.6**

Relevant coursework in: — **Dean's List: Spring 2014, Fall 2014**

- Advanced GIS, GIS Programming, Spatial Analysis, Hydrogeology, Hydrologic Field Methods

SOFTWARE AND FIELD SKILLS

ArcGIS Pro, ArcGIS Online, Enterprise, ArcMap

- Querying and displaying data via Python, SQL, and Arcade
- Cartographic figure creation, web maps, web applications
- Data creation, editing / managing geodatabases, feature datasets, raster and vector datasets, process automation
- Georeferencing, surface interpolation, spatial autocorrelation, spatial statistics

Adobe Creative Suite – Photoshop, Illustrator, InDesign, Acrobat, Spark

AutoCAD, RockWorks

Python, R, JavaScript, HTML SQL, Arcade, MATLAB coding

Survey 123, Collector for ArcGIS, Field Maps

ERDAS IMAGINE

Microsoft Office Suite

MicroStation

Terrasolid

- TerraScan, TerraModeler

Trimble Total Station, Garmin GPS units

YSI Sonde, ADCP, Velocimeter, HOBOware

PROFESSIONAL EXPERIENCE

Kennedy Jenks Consulting — **September 2020-Present**

GIS Analyst — **Whitefish, MT**

- Compile, process, and analyze Lidar datasets and interpret aerial photos
- Utilize programming languages such as Python and JavaScript to enhance apps and workflows
- Create web maps and applications on ArcGIS Online and Enterprise
- Assist and administer data migration to the ArcGIS Enterprise platform
- Calculate storage capacity curves and watershed delineation via Lidar datasets and ArcGIS Pro
- Interpolate point data to visualize groundwater contamination and flow
- Perform field data collection, reports, and cartographic figure creation on a variety of projects and tasks

Glacier National Park — **October 2019-October 2020**

GIS Technician / Data Specialist — **West Glacier, MT**

- Led and collaborated on app development for field crews ensuring compatibility with existing databases
- Designed complex geodatabase structures for new and existing databases using ArcGIS Pro
- Displayed data using various cartographic techniques via ArcGIS and Adobe Suite
- Wrote advanced SQL and R queries for large databases using Microsoft Access
- Created web apps and ESRI Story Maps utilizing ArcGIS Online
- Provided technical guidance to NPS employees regarding mapping questions

Lolo National Forest — **May 2018-Nov 2018; April 2019-Oct 2019**

Hydrologic Technician — **Missoula, MT**

- Performed scientific and technical evaluations, correlation, synthesis, interpretation, and presentation of hydrologic data using a suite of software, GIS tools, and methods to aid in geospatial and statistical analyses
- Updated and analyze geodatabases using GIS, remote sensing, web-based mapping, and Microsoft Excel
- Conducted analyses on field data using ArcGIS suite including the Spatial Analyst and 3D analyst toolsets
- Identified wetland indicators and mapped wetland boundaries
- Performed geomorphic field assessments with Total Station and GPS

Bureau of Land Management   May 2015-September 2015; May 2017-October 2017
Biological Science Technician - Aquatic Riparian Effectiveness Monitoring Program   **Corvallis, OR**
- Surveyed watersheds throughout the Pacific Northwest for stream health indicators
- Led and trained a team of 3-4 people of varying ages and skill levels
- Surveyed channel morphology and cross-sectional profiles using Trimble Total Station and GPS units
- Monitored pH, conductivity, and temperature data as indicators of watershed condition
- Collected eDNA, macroinvertebrates, and water samples to determine habitat suitability
- Understood underlying ecological principles in order to make educated decisions on effective data collection

Lolo National Forest / Lolo Watershed Group   January 2016-November 2016
Hydrologic Technician / Water Resource Scientist   **Missoula, MT**
- Planned, organized, and led a riparian revegetation project which recruited over 70 volunteers
- Created and analyzed maps using ArcGIS for resource analysis
- Wrote technical reports and training instructions for future employees
- Researched and created a Watershed Restoration Plan for the St. Regis River watershed
- Built a website for Lolo Watershed Group using HTML coding

Quantum Spatial   September 2015-December 2015
Remote Sensing Technician   **Corvallis, OR**
- Processed orthoimagery and LIDAR data to aid various public and private institutions research efforts
- Characterized and calibrated land features and vegetation from Lidar and photogrammetric data sets using MicroStation, TerraModeler, and TerraScan
- Consulted various sources to accurately classify specific land types
- Generated ground models for TIN and DEM creation

Polar Geospatial Center   March 2014-May 2015
Geospatial Support Assistant   **St. Paul, MN**
- Manipulated, processed, and analyzed satellite imagery and DEMs using ArcGIS and ERDAS Imagine
- Utilized Python scripting to collate, rename, orthorectify, and distribute satellite imagery
- Produced elevation mosaics using stereophotogrammetric DEMs
- Managed, organized, and edited large databases via Microsoft Excel and ArcGIS

ACTIVITIES AND LEADERSHIP

CPR Certificate	**March 2021**
US Army Corps of Engineers Wetland Delineation Training	**May 2019**
Timber Cruiser Training	**May 2019**
N-9042 Resource Advisor Training	**November 2018**
Wildland Firefighter Training	**June 2018**
S-212 Saw Training	**May 2018**
Wilderness First Aid	**May 2017**
Swiftwater Safety Training	**June 2016**
Polar Spatial Boot Camp, University of Minnesota, Polar Geospatial Center	**August 2014**

INDEPENDENT ORIGINAL RESEARCH EXPERIENCE

University of Minnesota Department of Geography, Environment, and Society   **Minneapolis, MN**
Detecting Calving Rates and Velocity of Hubbard Glacier, Alaska, Using Image Correlation Techniques   **Fall 2014**
  Advisor: Dr. Steven Manson
- Established methods to derive velocity and calving rates from Hubbard Glacier via satellite imagery
- Created Python and ModelBuilder workflows to efficiently derive results
- Utilized spatial statistics to remove spurious data points
- Analyzed temporal velocity/calving rate data via MATLAB describing relationships and future trends

HONORS AND AWARDS

- 2nd Place – 2021 Web Map/Application MAGIP Big Sky GeoCon
- 1st Place – 2015 Undergraduate Oral Presentation Competition Minnesota GIS/LIS Consortium
- 2015 Minnesota GIS/LIS Student Scholar Award
- Outstanding Senior Thesis Award – Department of Geography, Environment, and Society