

Joshua Zoellmer

Education

University of Minnesota, Twin Cities, Minnesota

September 2016-May 2018

- Masters of Geographic Information Science with a graduate minor in Conservation Science
- Graduated with 3.93 cumulative GPA
- Courses: ArcGIS I and II, Remote Sensing, Conservation Biology, GIS in Environmental Science and Management, Drones, Principles of Cartography, Spatiotemporal Modeling

Carleton College, Northfield, Minnesota

September 2010-June 2014

- Graduated *cum laude* with Bachelor of Arts in Geology
- Independent senior thesis centered on the creation of a surficial mineral map near Lake Turkana, Kenya using ENVI 5.0 software and Hyperion hyperspectral data
- Courses: Calculus II and III, Hydrology, Statistics, Biology, Physics, Chemistry, Remote Sensing, GIS, Mineralogy, Petrology, Structural Geology, Tectonics, Paleobiology

Earth and the Environment in Italy, Coldigioco, Italy

August 2012-October 2012

- Coursework was intensive field-based integration of geology and environmental science concepts
- Twelve week program based at the Osservatorio Geologico di Coldigioco

Work Experience

Geologist, Kraemer Mining and Materials, Burnsville, Minnesota

October 2014-Present

- Routinely use ArcGIS and AutoCAD Civil 3D to model subsurface geology and regional and local water tables using online data, field observations, well logs, geologic and hydrologic reports
- Fulfill permit requirements by collecting, compiling, and reporting regular water level readings from monitoring wells and water samples from discharge locations
- Measure hydraulic properties of aquifers with slug and step drawdown pumping tests
- Proficient with survey-grade GPS units and surveying techniques and regularly provide measurements for data collection, quarry logistics, and mining operations
- Pilot drones and process data to analyze volumes and create precision digital elevation models
- Conduct exploration geology across the United States, collecting soil and rock samples using direct push, production, or sonic core drilling, excavator test pitting, or hand augers
- Create maps and figures and use Microsoft Excel, PowerPoint, Word, and PowerBI to efficiently and effectively present to company leaders, regulating agencies, clients, and the public

Volunteer, Wildlife ACT, KwaZulu-Natal, South Africa

January 2018

- Aided conservation workers in monitoring threatened and endangered animals in UMkhuze Game Reserve and analyzed African wild dog behavior from tracking collar data using R statistical modeling

GIS Specialist, Carleton College, Northfield, Minnesota

March 2012-August 2014

- Hired to complete a variety of tasks for college professors and students including mapping the evolution of ancient European languages, making an informational brochure about GPS use, and compiling New Jersey census and zip code data
- Determined the urban extent and performed a land cover classification from ASTER, SPOT, and Quickbird imagery for the years 2001, 2006 and 2011 using ENVI 5.0 software to predict the future urban expansion and land cover change in Addis Ababa, Ethiopia based on previous growth patterns
- Utilized ArcGIS model builder and LiDAR data to extract building heights of seven Minnesota metropolitan counties as input data used to determine noise propagation from roadways

Field Assistant, Quetico Provincial Park, Ontario, Canada

July 2013

- Conducted field mapping of Archean rocks, focusing on foliation and lineation in order to gain insight about the tectonic history of the region
- Provided support in paddling, camp set up and clean up, mapping, GPS data collection and organization, and portaging.

Field Assistant, Princeton University, Western United States

August 2013

- Assisted a Princeton University student in using GPS to survey and map the paleoshoreline of Lake Bonneville, an ancient lake that was a precursor of the current Great Salt Lake
- Aided in data collection, and was in charge of navigation and equipment maintenance.

Laboratory Assistant, Princeton University

November 2012 – December 2012

- Worked alongside professors, graduate students, and postdoctoral scholars within the geosciences department in preparing over 600 samples for analysis

Extracurricular

Society for Conservation GIS

Sigma Xi, the Scientific Research Society

Intercollegiate Baseball, Carleton College

International Travel: Canada, Croatia, England, Germany, Ireland, Italy, Peru, South Africa, Tanzania

Skills

- ArcGIS, AutoCAD Civil 3D, Microsoft Office, Adobe Illustrator and Photoshop, R, Python, Remote Sensing, UAVs, Data Collection and Analysis, Field Work, GPS, Cartography