

Robert Sterling Spencer, EIT

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(719) 331 - 7790

EDUCATION

Master of Science, Environmental and Water Resources Engineering

Graduation: Dec 2016

University of Texas at Austin | GPA: 3.86

Bachelor of Science, Environmental Engineering

Graduated: Dec 2014

University of Colorado at Boulder | GPA: 3.42 | Dean's List (5)

RELEVANT WORK EXPERIENCE

National Renewable Energy Laboratory (NREL)

Golden, CO 80401

Mar 2017 - Present

Engineer II – Data Scientist & Environmental Engineer

- Assisting with creating visualizations, writing proposals, data analysis, software development, conducting usability tests, data curation/QA, etc.

Science Systems and Applications, Inc. (SSAI)

Greenbelt, MD 20771

Mar 2017 - Present

Scientific Programmer/Analyst I (See descriptions below for NASA: Goddard Space Flight Center)

NASA: Goddard Space Flight Center (GSFC)

Greenbelt, MD 20771

Jun 2016 - Dec 2016

Student Research Assistant (Aug 2016 – Dec 2016) | Graduate Intern (Jun 2016 – Aug 2016)

- Evaluated a satellite retrieval algorithm's quality assurance for atmospheric aerosols by performing geospatial and temporal collocations and exploratory data analysis with aircraft and ground-based instruments.
- Developed scripts to extract, sample, and visualize key areas from large remote sensing datasets and imagery.
- Aided atmospheric scientists in characterizing the interactions and uncertainties between aerosols and clouds.

University of Texas Center for Research in Water Resources

Austin, TX 78705

Jan 2016 - May 2016

Graduate Research Assistant

- Developed a framework and workflow for producing planning maps for emergency responders in flooding events.
- Visualized probable flooding depths and velocities at river crossings for road closures from a hydraulic model.
- Worked with stakeholders to optimize communication interfaces between forecasting systems and firefighters.

Institute of Arctic and Alpine Research

Boulder, CO 80303

May 2013 - Aug 2015

Antarctic Field Research Grantee

McMurdo Dry Valleys LTER, Antarctica

Dec 2014 - Feb 2015

- Procured climate and ecological data through stream flow measurements, land surveying, water quality sampling, and algal mass collection, while maintaining a network of hydrologic stream gauges in Antarctica.
- Lived and worked among a small efficient team while inhabiting Antarctica's extreme environments.

Undergraduate Research Assistant

- Rectified and published raw stream flow, rating curve, and water quality records for an online database.
- Developed a regression analysis to model synthetic hydraulic behaviors of a glacier-fed stream.
- Conducted sampling and tracer studies at various rivers and lakes within Colorado's watersheds.
- Assisted with preparing graduate research papers for publication through peer review sessions.

RELEVANT VOLUNTEER EXPERIENCE

Engineers Without Borders, University of Colorado's Nepal Team

Mar 2011 - May 2013

Project Design Leader (May 2012 – May 2013) | Treasurer (Dec 2011 – Dec 2012)

- Effectively provided clean drinking water to a developing community of over 200 Nepali people by designing and constructing a protection system and tap stand for a fresh water spring.
 - Ensured sustainability of a water treatment system for a hospital in Nepal by composing an O&M plan.
 - Collected, compiled, and assessed land survey data and performed water quality tests on spring sources.
 - Obtained approval to implement technical design plans through collaboration with licensed engineers.
 - Documented health and safety forms pertaining to site and travel safety.
 - Developed strong relationships with the community by participating in user group and municipality meetings.
 - Successfully maintained an annual budget of approximately \$100,000 by managing withdrawals and spending.
 - Secured funding through writing grant proposals, organizing fundraiser events, and presenting to rotaries.
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Other Activities and Affiliations

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| • Freelance Private Tutoring for all levels of STEM topics | Aug 2015 – Feb 2017 |
| • American Geophysical Union | Aug 2016 – Present |
| • American Water Works Association – Rocky Mountain Region | Oct 2011 - Present |
| • Society of Environmental Engineers | Aug 2011 - Dec 2014 |
| • Volunteering – Habitat for Humanity, Volunteers for Outdoor Colorado | |

Awards and Honors

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| • NASA Goddard Student Poster Session Swoosh Award – 1 st Place | 2016 |
| • NSF's Antarctica Service Medal of the United States of America | 2015 |
| • RMWEA/RMSAWWA Student Design Competition – 2 nd Place | 2014 |
| • Engineers Without Borders – Chapter of the Year Award | 2012 |
| • Art Institute Scholarship – 2 nd Place | 2009 |

Skills: Algorithm Development | Spatiotemporal Data Analysis | Visualization | Uncertainty Modeling (Monte Carlo Simulation, Multivariate, Extreme Value) | Systems Modeling | Multi-objective Optimization | L/NL Programming | Bayesian Inference | Decision Trees | Hypothesis Testing | Machine Learning (ANN, SVM, Clustering) | Data Curation/QA | Cost-Benefit Analysis | Land Surveying

Tools: Python | ArcGIS | AnyLogic | SAS | SQL | R | Bash | GAMS | LaTeX | GitHub | Matlab | VBA | Adobe | HTML | C++

Courses: Decision, Risk, and Reliability | Sustainability & Renewable Energy | GIS | Systems Engineering | Statistics | Regression Analysis | Water Resources Planning & Management | Sampling & Analyses | Material & Energy Balances | Fluid Mechanics | Heat Transfer | Thermodynamics | Engineering Processes | Ecology | Geomorphology | Hydrology | etc.

References available upon request

My GitHub homepage URL: [RSpencer019.github.io](https://github.com/RSpencer019)