Kevin M. Zolea

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ENVIRONMENTAL DATA SCIENTIST

Data Science | Statistical Analysis | Collaboration

Experienced environmental data scientist with 5+ years of expertise in extracting insights from large datasets using R, ArcGIS, and Python. Skilled in developing and maintaining web applications, automating QA/QC/reporting, and creating data visualizations and geospatial maps to streamline data processing. Adept at collaborating with teams and effectively communicating key insights to inform decision-making.

SKILLS

- Proficient in Microsoft Office products (Excel, Outlook, Word, PowerPoint)
- Data analysis and visualization tools: R (tidyverse, shiny, Rmarkdown, sf, leaflet), Python (numpy, pandas, matplotlib), and ArcGIS

PROJECTS

Road Salt Application| Developer

Application Link: https://kzolea695.shinyapps.io/NJDEP_Roadsalt_app/

- Developed a one-stop dashboard using R Shiny to guide the NJDEP's Division of Water Monitoring in addressing the negative effects of road salt on streams and aquifers.
- Collected data from 3,644 monitoring stations throughout NJ for the years 1997-2018 and measured three major pollutants: specific conductance, total dissolved solids, and chloride.

Delaware Tributaries Support Application| Developer

Application Link: https://kzolea.shinyapps.io/Delaware_Tribs_App/

- Created a web-based application to aid in decision-making for the Delaware Tributaries Project's modeling efforts.
- Utilized R Shiny, Leaflet, and ggplot2 to craft interactive data visualizations and streamline data processing.

WORK EXPERIENCE

New Jersey Department of Environmental Protection - *Trenton, NJ* 03/2018 - PRESENT

Environmental Specialist II

Environmental Specialist I

Environmental Specialist Trainee

- Develop and maintain 5 R Shiny applications that automate data visualization and assist with environmental air and water quality projects, resulting in a 50% reduction in time spent on data processing and analysis.
- Utilize Rmarkdown to automate data exploration and visualization, resulting in a 30% increase in efficiency and accuracy.
- Conduct statistical analysis using R to extract valuable insights from large datasets, resulting in improved understanding of environmental trends and potential issues.
- Create geospatial maps and perform geospatial analysis using ArcGIS to aid decision-making, resulting in more informed and accurate recommendations.
- Ensure data quality and accuracy by performing regular quality assurance on all incoming data for 4 data hubs, resulting in a 90% data quality rating.

National Center for Environmental Prediction- *College Park, MD* 05/2017 - 08/2017

Summer Research Intern

- Led and managed a 3-month research study on numerical weather prediction model trends, resulting in valuable feedback for model developers and increasing precision by 15%.
- Co-authored research paper/poster with numerous research scientists, presenting findings at the American Meteorological Society Conference.
- Produced and implemented RMarkdown scripts for automating report writing process, resulting in a 35% increase in efficiency and accuracy.

Colorado State University – *Fort Collins, CO* 05/2016 - 8/2016

Summer Research Intern

- Managed a successful 8-week research project analyzing large datasets to identify trends between weather events, resulting in a 20% increase in accuracy of predictive modeling for future weather events.
- Applied statistical software, including Python, to create visualizations and reports, which significantly increased the efficiency of data analysis and reduced processing time by 25%.
- Collaborated with a team of five researchers to present findings to senior leadership, resulting in the implementation of new research strategies that improved hurricane prediction and reduced overall costs by 15%.

EDUCATION

Kean University- *Union, NJ*

Bachelor of Science- Earth Science/Geoscience/Mathematics (Minor)