ELKE WINDSCHITL

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SUMMARY OF QUALIFICATIONS

- 3 years of scientific programming experience in R; 1 year of experience in Python; experience in SQL.
- Experienced in data preparation, data visualization, descriptive statistics, and geospatial analysis in R.
- Strong foundation in inferential statistics, machine learning, environmental modeling, and remote sensing.
- Efficiently work within collaborative teams; equally at ease working independently; strong communication.

EDUCATION

Master of Environmental Data Science, 3.97 GPA (6/23)
Bren School of Environmental Science & Management — University of California, Santa Barbara (UCSB)
Highlighted Coursework: Modeling Env. Systems, Geospatial Analysis and Remote Sensing, Machine Learning in Env. Science, Statistics for Env. Data Science, Data Visualization and Communication

Bachelor of Science in Biology with Honors, 4.00 GPA (5/20)
College of Agriculture and Life Sciences — Iowa State University (ISU)

DATA SCIENCE PROJECTS

Master's Capstone: Developing a Data Pipeline for Kelp Forest Modeling, (1/23–6/23)
Role: Environmental modeling, project management | **Clients:** Ocean Rainforest Inc., UCSB

- Aligned spatiotemporal resolution of 13 spatial data sets in R with *terra*, *raster*, & *sf*, to create a synthesized data set containing oceanographic factors and metrics of giant kelp distribution as a deliverable for clients.
- Performed maximum entropy species distribution modeling in R with *ENMeval* to estimate where on the Santa Barbara coastline has the highest predicted habitat suitability for kelp cultivation and restoration.
- Created maps and visualizations in R with *gpplot2*, *Leaflet*, & *tmap* to communicate the spatial distribution of kelp, temperature, depth, and nutrients in the Santa Barbara Channel as well as identify data gaps.

Statistics Course Project: Identifying Key Traits in Hawaiian Fish that Predict Risk of Extinction, (10/22–12/22)

- Retrieved, filtered, and joined large data tables from FishBase and the Red List API in R with *dplyr*.
- Leveraged *stats* to run a series of logistic regression models to investigate the probability of a species being listed as threatened on the Red List based on characteristics such as endemism or length.
- Communicated study results by creating *ggplot2* visualizations and writing an online Quarto report.

PROFESSIONAL EXPERIENCE

Batten Research Fellow — Virginia Aquarium & Marine Science Center, Virginia Beach, VA, (7/21–9/21)
Developed and executed a scientific experimental design to study animal behavior; collected and analyzed behavior data of 2 seals and 1 crow using ZooMonitor software and R; presented research results to ~50 aquarium staff via a 45-minute Zoom PowerPoint presentation to inform science-based animal care.

Research Assistant — Iowa State University Janke Lab, Ames, IA, (1/19–12/19, 7/20–8/20)
Processed, analyzed, and visualized extensive quail audio data using R, Raven Pro, and Excel; investigated the potential to use autonomous recording units to study Northern bobwhite quail; presented results at the National Conference on Undergraduate Research and for the Iowa Department of Natural Resources.

SKILLS & CERTIFICATIONS

Programming Languages: R (proficient); Python, SQL (competent); Bash (beginner)
Additional Digital Literacy: GitHub, Git, Microsoft 365 (proficient); Google Earth Engine, ArcGIS (beginner)
Certifications: Fundamentals of GIS; GIS Data Formats, Design, and Quality, University of California, Davis (3/21)