

Ryan Munnikhuis

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QUALIFICATION SUMMARY

- 3+ years of environmental consulting experience, assessing the geologic, hydrologic, air quality, greenhouse gas, and forestry-related impacts of projects throughout California.
- Master's degree in environmental data science with a focus in data management, temporal and geospatial analysis, data visualization, statistical evaluation, and reproducible and robust workflows.
- Interdisciplinary programmer proficient in Python, R, SQL, Markdown, Bash, and PowerShell languages.
- Successfully developed in-depth Python tutorials and interactive, web-based figures depicting historical trends of snow cover and albedo for the National Snow & Ice Data Center (NSIDC) Snow Today website.

EDUCATION

Master of Environmental Data Science (06/22)

Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)

Master's Group Project: *Improving Usability of Snow Data Through Web-Based Visualizations and Tutorials*

Highlighted Coursework: Modeling Environmental Systems; Data Visualization and Communication; Remote Sensing and Environmental Data; Spatial Analysis for Environmental Data Science

Bachelor of Science in Earth Sciences with a Concentration in Environmental Geology (05/17)

University of California, Santa Cruz (UCSC) – Santa Cruz, CA

Senior Capstone Project: *Geospatial Analysis of Glacial Moraines and Faults, Eastern Sierra Nevada*

MASTER'S CAPSTONE PROJECT

UCSB, Santa Barbara, CA

Project Manager | Client: UCSB Earth Research Institute (01/15 – 06/22)

- Principal author of Python tutorials to assist a variety of end-users in accessing and processing geospatial datasets. Tutorials are stored in a publicly accessible Github repository.
- Processed 20 years of snow cover and albedo HDF5 datasets across the Sierra Nevada Mountain Range.
- Developed interactive web-based visualizations to show historical trends in snow cover and albedo. Figures will serve as a template for visualizing global snow properties on the Snow Today website.
- Documented steps clients could take to improve the dataset's metadata's usability and accessibility.
- Convened weekly with clients to discuss progress made and ensure project end-goals were tenable.

ENVIRONMENTAL CONSULTING EXPERIENCE

Dudek, Santa Barbara, CA

Environmental Technical Specialist (10/20 – 8/21)

- Modeled air pollutants and greenhouse gas emissions associated with the construction and operation of proposed projects using the California Emissions Estimator Model (CalEEMod).
- Quantified the estimated petroleum, natural gas, and electricity consumption rates of construction and operation developments to ensure the project aligns with state-wide energy reduction goals.
- Prepared documentation pursuant to the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and other environmental laws and regulations.
- Evaluated air quality, energy, and greenhouse gas-related impacts of CEQA and NEPA projects.

ENVIRONMENTAL CONSULTING EXPERIENCE (Continued)

Forester (05/20 – 08/21)

- Identified, evaluated, and recorded post-fire hazard trees to determine the likelihood of failure for local and state agencies in a 5-year timeframe.
- Proposed fire hazard abatement strategies to meet county and local fire protection goals.
- Conducted tree inventories to determine the health and diversity of a community forest.
- Aided in the preparation of wildfire plans and in-field safety documents.
- Addressed in-field safety issues to ensure the well-being of tree crews and arborists.

Environmental Analyst (04/19 – 11/20)

- Evaluated the geologic, hydrologic, and utility-related impacts for CEQA and NEPA-associated projects.
- Ensured that CEQA and NEPA-related projects complied with federal, state, and local regulations.
- Quantified water usage, wastewater, and solid waste generation rates for proposed developments.
- Proposed mitigation strategies to ensure that projects do not violate regional or federal standards.
- Liaised with private and governmental agencies to ensure sufficient utility supply and infrastructure were available to meet proposed project demands.

Davey Resource Group, Santa Cruz, CA

Senior Consulting Utility Forester (08/18 – 02/19)

- Managed and trained a team of 11 foresters on plant identification and vegetation listing guidelines.
- Coordinated activities of the team to enable an effective and efficient workflow.
- Collaborated with local and state agencies on a day-to-day basis.
- Oversaw line-clearance contractor's activities to ensure work maintained a high degree of accuracy.

Consulting Utility Forester (10/17 – 08/18)

- Contracted with a local utility company to evaluate and mitigate hazard trees near high-voltage lines.
- Compiled and assessed data for detailed and accurate field reports.
- Generated parcel maps using geographic information system (GIS) for in-field data entry and analysis.

ADDITIONAL EXPERIENCE

UCSB—Santa Barbara, CA

Teaching Assistant (9/21-06/22)

Taught section lectures for upper- and lower-division courses in the Earth Science department; Assisted in the preparation and grading of course-specific exams and exercises; Tutored 120 students on course materials

Beckmann's Old World Bakery—Santa Cruz, CA

Farmers Market Vendor (09/15 – 08/17)

Operated and managed multiple booths at farmers' markets in the greater Bay Area.

Flora Gardens—Ojai, CA

Nursery Assistant (03/14 – 08/15)

Assisted with plant selection, pruning, feeding, and watering plant inventory.

SKILLS & CERTIFICATIONS

Languages: R, Python, SQL, Markdown, Bash, PowerShell

Software: Microsoft Office (Word, Excel, PowerPoint, Outlook); Rstudio, Anaconda, Jupyter Notebook, Jupyter Lab, ArcGIS, QGIS, California Emissions Estimator Model (CalEEMod), Tableau 2021.4, Visual Studio Code

Field Experience: ArcGIS Collector, Trimble Geospatial Data Collectors, Brunton Compass

Certifications: International Society of Arboriculture, Certified Arborist: WE-1291A (May 2020); Oregon State University Technical Writing Certificate (July 2020)