

JACK DALEY

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EDUCATION

University of California, Los Angeles (UCLA), Los Angeles, CA

Expected December 2023

BA in Geography, Minor in GIS and Technology

- 3.88 Overall GPA
- Relevant Coursework: GIS programming in Python, Machine Learning for the Physical Sciences, Remote Sensing and Digital Image Processing, Advanced GIS, Introduction to Computer Science in C++
- Study Abroad: Environmental Studies at Pontificia Universidad Católica de Chile in Villarrica, Araucania, Chile, and Spanish Language Studies at Pontificia Universidad Católica de Chile San Joaquín Campus, in Santiago, Chile.

ACADEMIC PROJECTS

- Conducting independent research project aimed at developing model to analyze cardiovascular disease related to various environmental variables. Utilizing popular machine learning algorithms with python scikitlearn library.
- Conducted geospatial research in rural Chile exploring the effects of increasing tourism on local communities and the environment in and around the town of Pucón. Extracted results from the spatial combination of public datasets and primary data collection. Findings are being published in UC Berkeley's Environmental Science Research Journal, Perennial.
- Developed an ArcGIS Pro Tool based on Python Code functioning to determine extent of environmental effects of oil spills on Marine Protected Areas (MPAs).
- Led a group research project utilizing ArcGIS Pro to identify and spatially analyze resource strains in the western United States and develop possible real world solutions to them.
- Creating DSMs (digital surface models) and orthomosaics for environmental land use/ land cover spatial analysis project.
- Identified urban land use/ land cover changes in the Washington D.C Metropolitan area during the 1990s and described these quantified changes in historical context.

EXTRACURRICULAR RESEARCH

- Assisting NASA and UCLA Institute of the Environment and Sustainability with spatial data collection, engineering, and input pipeline for tree height prediction model. Gathering data for wide variety of forest types and utilizing R to aggregate LiDAR data with satellite imagery for model.
- Conducted field research assisting NASA EMIT (Earth Surface Mineral Dust Source Investigation) to determine chemical composition of soil in California's Owens Valley. Used an Imaging Spectrometer and practiced standard field research procedures.

PROFESSIONAL EXPERIENCE

Arup, Los Angeles, CA

Geospatial Intern

June 2023 - August 2023

- Developed automated workflows for data integration using popular geospatial software such as FME and ArcGIS Pro Modelbuilder.
- Managed web mapping applications built from ArcGIS Experience Builder, Fuse, and ArcGIS Dashboards for regular client use.
- Consulted numerous clients from various Architecture/Engineering/Construction projects including the CP2 BART (Bay Area Rapid Transit) extension in San Jose, CA, as well as an urban environmental resilience project in Southern California, with geospatial solutions for various problems.

Bureau of Land Management, Carlsbad, NM

GIS Specialist Intern

June 2022 - August 2022

- Experimented with the powers of ArcGIS Pro while working to improve future spatial data input.
- Introduced ArcGIS Pro ModelBuilder and certain data science techniques to several new departments of the office.
- Strengthened technological communication skills by sharing findings with others for future benefit.

LEADERSHIP EXPERIENCE

Geography Association at UCLA, Los Angeles, CA

Vice President

May 2022 - Present

- Facilitating interactions between Geography Department Administrators, club board members, and alumni to bring together Bruins interested in Geography and/or GIS.

UCLA Club Track and Field, Los Angeles, CA

Social Media Chair

June 2022 - June 2023

- Devised methods to recruit members to a community-oriented competitive athletic club.

TECHNICAL SKILLS

- Microsoft Office Suite, QGIS, ArcGIS Pro, FME, ArcGIS Online, Python (Arcpy, Numpy, SciKitLearn), R, ENVI, C++