Declan Pizzino

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Declan Pizzino is a Geospatial Analyst with the Conservation Biology Institute and has more than 5 years experience applying science and geospatial technology to support the conservation of natural resources. With a B.S. in Environmental Science and a certificate in Geographic Information Science from Oregon State University, Declan is excited to be part of a team that is focused on a science-based approach to improving the world. His areas of expertise and interest include geographic information systems, remote sensing, machine learning, modeling, and sustainability planning.

Declan's love for the natural world has informed and enhanced his passion for conservation. Prior to joining CBI, he worked with the Nature Collective in San Diego, CA, on water quality monitoring and with Yamhill County Public Works in McMinnville, OR, to help develop a spatial roadside vegetation inventory. In Eugene, OR, he worked for Lane Council of Governments leveraging his GIS and interpersonal skills in the local government arena. Declan participates in a number of professional organizations and communities, including the Spatial Community Slack, AI for Conservation, Machine Learning for Remote Sensing, the Data Visualization Society, and the Society for Conservation GIS, where he serves on the Communications Committee.

EDUCATION

2018 B.S. Environmental Science, Specialization in Conservation, Resources, and Sustainability. Oregon State University, Corvallis, Oregon.

2018 Undergraduate Certificate in Geographic Information Science. Oregon State University, Corvallis, Oregon.

2013 A.A. Liberal Arts, Emphasis in Arts and Humanities. Miracosta Community College, Oceanside, California.

EMPLOYMENT HISTORY

2019 – Present Geospatial Analyst, Conservation Biology Institute, Corvallis, Oregon

2019 – Present Communications Committee Member, Society for Conservation GIS

2019 – 2019 GIS Assistant, Lane Council of Governments (LCOG), Eugene, Oregon

2018 – 2019 GIS Analyst Intern, Conservation Biology Institute, Corvallis, Oregon

2017 – 2017 GIS Intern, Yamhill County Public Works, McMinnville, Oregon

2012 – 2012 Water Quality Monitoring Intern, San Elijo Lagoon Conservancy, Encinitas, California

PROFESSIONAL SKILLS

Geographic information systems, spatial analysis and modeling, remote sensing, machine learning, water quality and vegetation monitoring, conservation and renewable energy planning, data visualization, science communication and public speaking, and marine spatial planning.

Data Processing and Analysis: geopandas, rasterio, pandas, sci-kit learn, SHAP, tidyverse, ranger, EEMS, Google Earth Engine

Software: ESRI ArcGIS, QGIS, Adobe Creative Suite

Scripting Languages: Python, R

SELECT PROJECT EXPERIENCE

California Offshore Wind Energy Renewable Energy Planning – Geospatial analyst on CBI team providing the State of California with EEMS least-conflict modeling for decision support. Data acquisition and processing for the CA Offshore Wind Gateway, a data portal developed by the CA Renewable Energy Task Force to investigate the potential for offshore wind energy development. Executed EEMS least-conflict modeling for analysis of areas potentially suitable for wind energy generation.

Remote Sensing, Cloud Computing and Machine Learning to Characterize Conservation Reserve Program Lands in Washington, Colorado, Kansas, and Mississippi – Lead for machine learning development on a project mapping vegetation ground cover on lands enrolled in the USDA Conservation Reserve Program Grasslands by using remote sensed data (NASA Landsat and ESA Sentinel sensors) and random forest machine learning.

Characterizing Mississippi Forests with Remotely-Sensed Data and Machine Learning (USDA Conservation Reserve Program) – Lead for machine learning updates and development on project mapping bottomland hardwood forest metrics (composition, basal area, tree height, biomass, tree density) on lands enrolled in the USDA Conservation Reserve Program, by using ESA's Sentinel-1 & Sentinel-2, and GEDI, NASA's spaceborne LiDAR, and random forest modeling.

Yamhill County Roadside Vegetation Inventory – Developed and piloted a roadside vegetation inventory across the 700-mile+ Yamhill County road system. Survey protocols and database development to map and document priority invasive weeds, native vegetation communities, soil erosion, and safety concerns/hazards for the Yamhill County Roadside Vegetation Management Committee to prioritize management actions on the ground.

SELECT PUBLICATIONS

Degagne, R., Pizzino, D., Friedrich, H., Gough, M., Joseph, G., Strittholt, J., and Smith, C. 2022. Mapping Conservation Reserve Program Grasslands in Washington, Colorado, and Kansas with Remote Sensing and Machine Learning. figshare. https://doi.org/10.6084/m9.figshare.19141853.v2

Degagne, R., Pizzino, D., Gough, M., Friedrich, H., Smith, C., Joseph, G., and Srittholt, J. 2022. Mississippi CRP Forest Remote Sensing with Preliminary Global Ecosystem and Dynamics (GEDI) Mission Derived Data Products. figshare. https://doi.org/10.6084/m9.figshare.19142147.v3