DAVID M. ORTEGA

Graduate of the Department of Geography, Environment, and Society
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EDUCATION

2016–2020: BS. Geography, University of Minnesota, Minneapolis, MN
MINORS: ENVIRONMENTAL SCIENCE MANAGEMENT AND POLICY – GEOGRAPHIC INFORMATION SYSTEMS (GIS) – SUSTAINABILITY STUDIES

RESEARCH & ACADEMIC EXPERIENCE

2020: **Student Researcher**, Department of Earth & Environmental Science (University of Minnesota)
Projects: Empirical Evidence of a global population decline in emperor penguins: a 10-year analysis
Supervising: Michelle LaRue (PhD)

2017: **Deans Creative Scholars Program Recipient**, Humphreys School of Public Affairs – Center for Human Rights
Supervising: Deborah Levison (PhD)

PROFESSIONAL EXPERIENCE

2021-Present: **GIS Analyst I**, Sentera November 2021 – Present
Supervising: Devon Libby
-Pre-processing and calibration of remotely sensed imagery including the following categories: Multispectral Thermal Imagery, NDVI, NDRE, and RGB. Imagery stitching using the Agisoft Metashape and Pix4d Mapper, GIS analysis of remote sensing data using QGIS to assess crop quantity/quality/density, collaboration with GIS analysis team to complete research and development projects using new technologies, Interfacing with FieldAgent web/desktop applications/database to ensure customer products are processed/distributed correctly.

2021: **GIS Technician**, Centerpoint Energy Linden Hills January 2021 – November 2021
Projects: Cartographic re-draw of Minnesota Natural Gas-Leak Monitoring Boundaries
Supervising: Catherine M O'Donnell
-Analysis, digitization, metadata documentation, and preparation of over 300 high quality map deliverables to customers for energy utility projects. Investigated solutions for geodatabase problems, and increased efficiency of map production for project team Coordinated tasks with project team to ensure optimum efficiency of project area completion

2021: **Assistant Researcher**, Department of Earth & Environmental Science (University of Minnesota)
Projects: Empirical Evidence of a global population decline in emperor penguins: a 10-year analysis
Supervising: Michelle LaRue (PhD)

-Analysis, organization, metadata documentation, and coordination of high-resolution satellite images for Antarctic ecological research Conducted supervised classification of 50+ sub-meter images to segregate present land classes in order to analyze total area of emperor penguins

PUBLICATIONS IN REVIEW/IN PREPARATION (*N* = 6); *DENOTES TRAINEE AUTHOR

M.A. LaRue, D. Iles, S. Labrousse, P. Fretwell, **D. Ortega**, E. Devane, B Horstman, L. Viollat, R. Foster-Dyer, D. Zitterbart, A. Houstin, C. Le Bohec, S. Richter, A. Winterl, B. Wienecke, L. Salas, M. Nixon, C. Barbraud, G. Kooyman, P. Trathan, S. Jenouvrier. 2022. Empirical evidence of a global population decline in emperor penguins a 10-year analysis *In preparation for Science*

GRANTS AND FUNDING

University of Minnesota Deans Creative Scholars Program (Minnesota Population Center). 2017, $2,000 USD.

RELEVANT COURSES COMPLETED

BIOL 1001 Evolution & Ecology, ESPM 1011 Issues in the Environment, CLA 1052 CLA Freshman Research, ESCI 1001 Earth and Its Environments, AFEE 2421 Communication for Ag, GEOG 3379 Env Development in 3rd World, GEOG 3431 Plant & Animal Geog, SOC 3811 Social Statistics, 3001 Ecology and Society, 3204 Landscape Ecology & Mgmt, 3411 Manage Forest Eco Silviculture, FNRM 3131 GIS for Natural Resources, GEOG 3511 Principles of Cartography, SUST 3003 Frameworks of Sustainability, URBS 3751 Urban Environment, FNRM 3262 Remote Sensing & Geographical Analysis of Natural Resources & Environment, SUST 4004 Sustainable Communities, GEOG 3423 Urban Climatology, GEOG 5563 Advanced GIS, LAW 3000 Introduction to American Law, ESPM 4061W Water Quality & Natural Resources, GEOG 3361W Geography and Public Policy, GEOG 3381W World Population, GEOG 3997 Senior Project, GIS 5574 Web GIS and Services

HONORS AND AWARDS

· Presidents Emerging Scholars Program Recipient 2016 ($1,200 USD)
· Deans Creative Scholars Program Recipient 2017 (2,000 USD)

SERVICE

- Community fundraising organizer during Minneapolis Civil Unrest: 2020 (Raised over $4,000 in two days for community food support)
- Sustainability Network Coalition Co-Lead Facilitator- 2017-2020 (Organization now known as Power in Unity UMN)
- MSA Sustainability Project Lead: Zero Waste Group 2016-2017
- Leadership Club Founder – School of Environmental Studies 2015-2016

OTHER SKILLS

Field Experience:

- BioBlitz Selected Participant - 2015: Using inaturalist mobile application to document personally surveyed species in Interstate State Park

- Conducted comprehensive environmental health survey on local pond environment in Eagan, MN, and presented findings to local water quality board: 2014 (Identified Purple Loosestrife in new area, documented for future invasive species monitoring)
- Accurately identified 100 various native species of plants, animals, and trees during School of Environmental Studies Natural History Exam: 2015
- Rock Climbing Instructor: 2020
- Comprehensive backcountry backpacking experience

Software Experience:
- ArcGIS 8.x, 9.x, 10.x
- Enterprise GIS databases
- ArcMap 10.x-QGIS 3.x
- Agisoft Metashape Stitching
- Pix4d Mapper
- Microsoft Office
- Slack
- Sentera custom analytics