Geraldine Klarenberg, PhD

I am a **Quantitative Data Scientist** with some qualitative data experience. I am passionate about any and all data; find them, make them usable, explore them, visualize them and analyze them. I have worked on a variety of datasets; spatial, satellite/remote sensing, survey, environmental, health-related. I approach every dataset and every project with excitement and curiosity. I love Exploratory Data Analysis (EDA) to summarize and better understand data, as well as statistical analyses and simulation model creation to answer important questions.

Areas of expertise: **Data cleaning and wrangling**, **Exploratory data analysis** (e.g. cluster analysis and dimensionality reduction), **Data visualization**, **Descriptive statistics**, **Inferential statistics** (e.g. multivariate regression and mixed effect models), **Time series analysis** (e.g. non-linear time series analysis, signal decomposition and causality), **Simulation (process) modeling** (e.g. matrix models, individual-based models), **Uncertainty and sensitivity analysis**, **Geographic Information Systems (GIS)** (spatial analysis in general), **Supervised machine learning** (classification: random forest, logistic regression), **Qualitative analysis** (survey analysis)

Currently working on: Google Machine Learning Crash course, NVIDIA DLI: Accelerated Data Science with RAPIDS

Things I want to learn: Scrum project management, text analysis, more HTML and CSS, cloud computing (AWS or Azure).

Professional Experience

current | 2019

Lecturer Quantitative Data Science (faculty)
University of Florida — Gainesville, Florida (USA)
School of Forest, Fisheries and Geomatics Sciences. - Teach undergraduate and graduate classes on programming, coding, open science and open data, data wrangling, reproducibility, simulation modeling, statistics and data visualization - using R, Python and git. - Conduct workshops on similar topics for faculty and staff. - Provide consulting services to students, staff and faculty on programming and statistics (methods, design, implementation). - Mentor and advise graduate students.

2019 | 2018

Post-doctoral Associate
University of Florida — Gainesville, Florida (USA)
Department of Wildlife Ecology and Conservation. - Development of a dynamic abundance model (state-space model) simulating long-term trends of annual tick populations in Florida, including weather-related and environmental variables. - Guide and mentor undergraduate and graduate students.

2018 | 2017

Post-doctoral researcher
University of Florida — Gainesville, Florida (USA)
Department of Agricultural and Biological Engineering. Development and analysis of indicators focused on Sustainable Intensification of agriculture in Tanzania, based on a dataset available through the Vital Signs project (www.vitalsigns.org). Main focus - environmental indicators: biodiversity, land cover, biomass, erosion, landscape fragmentation, rainfall and temperature anomalies. Others - economic, social, productivity and human condition indicators.

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Skills

Statistics
Machine learning
R programming language (incl Rmarkdown and Shiny)
Python
git, GitHub, GitLab
SLURM job scripts
Unix
Languages: English, Dutch, French, German

GALLUP StrengthFinder Themes (2015)

Executing:
1. Restorative - "I love to solve problems."
Influencing:
2. Communication - "I like to explain, to describe, to host, to speak in public, and to write."
Relationship building:
3. Harmony - "I look for areas of agreement."
4. Connectedness - "Things happen for a reason."
5. Adaptability - "I live in the moment."

Passions

Exploring, family, fixing things, running, hiking, water (in any shape or form), cooking, nature, life

*This resume was made with the R package **pagedown**.*
Last updated on 2022-06-09.

2017 | 2016

Biological Scientist II
University of Florida — Gainesville, Florida (USA)

- Development of a dynamic matrix population model for bonefish in the Florida Bay area, including optimization
- Analysis of a long-term Florida horseshoe crab monitoring dataset, and the development of a dynamic occupancy model (aka a state-space model)

2016 | 2015

Statistician
Suwannee River Water Management District — Live Oak, Florida (USA)

- Analysis of flow and water quality data for research and policy purposes
- Evaluation of, and assisting with, consultants' statistical analyses
- Contribute to database development and sampling designs
- Development of R code and scripts for data extraction, analysis, synthesis and presentation.

2015 | 2012

Graduate Research Assistant
University of Florida — Gainesville, Florida (USA)

At the Department of Agricultural and Biological Engineering, part of the project "Global Sensitivity & Uncertainty Analysis for Evaluation of Ecological Resilience: Theoretical Debates over Infrastructure Impacts on Livelihoods & Forest Change".

- Development of a spatially explicit dataset on environmental variables and variables associated with infrastructure development.
- Statistical analyses: clustering, development of a state-space model (Dynamic Factor Analysis) and non-linear time series analyses.
- Write reports, prepare and give presentations.

2011 | 2010

Consultant
Self-employed — South Africa / USA

Research, analysis, information syntheses and report development for various clients (government, universities, non-profits) on Integrated Water Resources Management, water supply and sanitation services, climate change adaption, etc. Contributed technical and public participation expertise.

2010 | 2005

Program manager / Policy Specialist
The Mvula Trust (NGO) — Johannesburg, South Africa

- Policy analysis and strategic document development (water provision, water resources management, rainwater management, multiple use of water)
- Project and program management (subcontractor management, budgeting, tendering, proposal and progress report writing) on behalf of the South African government.

Education

2017

University of Florida
PhD — Gainesville, Florida, USA

Agricultural and Biological Engineering with a certificate in Biological Systems Modeling

2004

Wageningen University
BSc and MSc — Wageningen, The Netherlands

International Land and Water Management (hydrology and irrigation) with a 'minor' in Law and Governance

Service

current | 2020

R-Users Group Gainesville
Organizer — Gainesville, Florida (USA)
We organize workshops, talks, tutorials and social activities for users of the programming language R.

current | 2018

R-Ladies Gainesville
Co-founder and organizer — Gainesville, Florida (USA)
R-Ladies is a worldwide organization whose mission it is to promote gender diversity in the R community. As the local chapter, we organize monthly meetings, workshops and socializing events.

2019 | 2018

UF Carpentries Club
Board member (treasurer) — Gainesville, Florida (USA)
I am also a Certified Data and Software Carpentry instructor since 2017, and still actively teach and help at UF Carpentries workshops on R and Python.

2018 | 2014

American Society of Agricultural and Biological Engineers
Various positions — Florida/USA
- Publicity chair for the Florida section (2017 - 2018)
- Member-at-large (Graduate Student Relationships) of the Young Professionals Community (YPC) at national level (2014 - 2015)

2015 | 2014

PhDMoms
Co-president — Gainesville, Florida (USA)
I led a graduate student organization at the University of Florida that supports doctoral student-parents, with specific attention to female student-parents

2015 | 2013

UF Agricultural and Biological Engineering Graduate Student Organization
President — Gainesville, Florida (USA)
Organization of professional development and social activities for graduate students.

current | 2013

Science fair judging (middle schools)
Judge — Alachua county, Florida (USA)