

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.

Professional Experience

current
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2019

● **Lecturer Quantitative Data Science (faculty)**

University of Florida  Gainesville, Florida (USA)

- 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
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2018

● **Post-doctoral researcher**

University of Florida  Gainesville, Florida (USA)

- 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
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2017

● **Post-doctoral researcher**

University of Florida  Gainesville, Florida (USA)

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.

2017
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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
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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.

Contact

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 @DinaKla

 [gklarenberg](https://github.com/gklarenberg)

Skills

Data cleaning 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

Simulation (process) modeling -

e.g. matrix models, individual based models

Uncertainty and sensitivity analysis

Supervised machine learning -

classification: random forest, logistic regression

Qualitative analysis - survey analysis

Personal Tool Box

R programming language - including Rmarkdown and Shiny

Python

git, GitHub, GitLab

super computer (SLURM)

Unix

html and CSS

Wishlist




This resume was made with the R package [pagedown](https://github.com/jgm/pagedown).

More html and CSS *updated on 2022-06-07.*

Machine learning



More html and CSS

Machine learning

- 2015
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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
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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
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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
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2020
- **R-Users Group Gainesville**
Organizer  Gainesville, Florida (USA)
Organization of workshops, talks, tutorials and social activities for users of the programming language R.
- current
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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. The local chapter organizes monthly meetings, workshops and socializing events.

2019 2018	<ul style="list-style-type: none"> UF Carpentries Club Board member (treasurer) 📍 Gainesville, Florida (USA) Also a Certified Data and Software Carpentry instructor since 2017. Still teach and help regularly at Carpentries workshops on R and Python.
2018 2014	<ul style="list-style-type: none"> American Society of Agricultural and Biological Engineers 📍 Florida/USA Various positions <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> PhDMoms 📍 Gainesville, Florida (USA) Co-president A graduate student organization at the University of Florida that supports doctoral student-parents, with specific attention to female student-parents
2015 2013	<ul style="list-style-type: none"> UF Agricultural and Biological Engineering Graduate Student Organization 📍 Gainesville, Florida (USA) President Organization of professional development and social activities for graduate students.
current 2013	<ul style="list-style-type: none"> Science fair judging (middle schools) 📍 Alachua county, Florida (USA) Judge