

DANIELLE QUINN

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EDUCATION

PhD Biology, Memorial U. (*in prog*)
MSc Biology, Acadia U. (2013)
BScH Biology, Acadia U. (2010)

Statistical consultant and **scientific programmer** with a strong background in biological sciences and **9 years** of experience developing reproducible analytical solutions for clients in natural resource management and scientific research, including data cleaning routines, statistical analyses, and dashboards. **Educator** with **5 years** of delivering pedagogically sound, high-impact training in scientific programming and statistics to global audiences, in person and online.

FREELANCE CONSULTING / TEACHING

2019 Emeritus Institute of Management / University of California Berkeley

- Designed curriculum, supported students, and delivered online courses: *Introduction to Data Science (R/RStudio)* (12 weeks), *Practical Machine Learning in R* (10 weeks).
- Created lectures, coding demonstrations, and formative and summative assessments.
- Developed automated grading routines to evaluate student-submitted .R and .Rmd scripts.

2019 Nunavut Wildlife Management Board (Iqaluit, NU)

- Performed exploratory data analysis and developed automated data QAQC routines.
- Developed an interactive RShiny Dashboard for exploring community-sourced data.
- Provided a roadmap for future analytical approaches, facilitating long-term ecosystem monitoring.

2018 DataCamp

- Designed curriculum and delivered online course: *Regression Modelling in R: Case Studies* (4 hrs).
- Created and recorded lectures, coding demonstrations, and formative and summative assessments.

2017 – 2018 Field School (Miami, FL)

- Designed curriculum and delivered annual course: *R for Ecological Modelling* (3 days).

2016 – 2018 Fisheries and Oceans Canada (Bedford, NS & St. John's, NL)

- Created an RShiny interface for non-technical fisheries experts to apply and document data cleaning routines through interactive SQLite database queries (via {dbplyr}) and visualizations.
- Automated analyses / reporting of fisheries-independent data to investigate the influence of environmental factors and the Labrador Current on localized fish assemblages.

2014 – 2017 Nova Scotia Department of Natural Resources (Kentville, NS)

- Performed exploratory data analysis and established best practices of cleaning transect survey data.
- Applied occupancy modelling techniques to evaluate the long-term effects of forestry practices on lynx population and provide recommendations for industry permitting.

2013 – 2016 Striped Bass Research Team (Wolfville, NS)

- Supervised data acquisition, data management, statistical analyses, and reporting of 3 – 5 concurrent Honours and graduate student research projects.
- Delivered one-on-one scientific programming and statistics training.
- Developed web-based application (`{shiny}`) used by local recreational anglers to report real-time catch data and explore existing fishing records.

2013 MITACS & Atlantic Elver Fishery (Wolfville, NS)

- Optimized the efficiency of long-term sampling protocols for American Eel via simulation routines.

2011 – 2013 Nova Scotia Department of Fisheries and Aquaculture (Parrsboro, NS)

- Moderated database redesign and management discussions between provincial biologist and database administrators/information technology experts.
 - Applied generalized linear modelling techniques to evaluate long term shifts in abundance and biodiversity indices across spatiotemporal resolutions.
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COMPUTING / ANALYTICAL SKILLS

- R / RStudio
- Spreadsheet Design
- Exploratory Data Analysis
- Data Visualization
- Statistical Modeling
- RMarkdown / Dynamic Reporting
- RShiny / Dashboards
- Simulation Methods
- OpenRefine
- Machine Learning
- Web Scraping (`{rvest}`)
- Git / GitHub
- Unix Shell

CERTIFICATIONS

- 2019 RStudio `{tidyverse}` Instructor
- 47 Instructors globally; 3 in Canada
- 2017 The Carpentries Instructor Trainer
- 71 Trainers globally; 4 in Canada
- 2016 The Carpentries Instructor

AWARDS AND GRANTS

- 2017 Natural Sciences Engineering Research Council of Canada Scholarship
- 2016 Atlantic Computational Excellence Network Research Fellowship Award

SELECTED PUBLICATIONS

Cereceda, O., & Quinn, D. A graduate student perspective on overcoming barriers to interacting with open source software. *FACETS*. (*accepted w/minor revisions October 2019*)

SELECTED CONFERENCES

2019 American Fisheries Society / Wildlife Society Joint Meeting (Reno, NV)

- The role of interactive user interfaces in wildlife and fisheries science (*Chair*)
- Enhancing reproducibility in fisheries science with interactive UIs (*Speaker*)

2018 Canadian Celebration of Women in Computing (Halifax, NS)

- Graduate students: between an open source rock and an academic hard place (*Speaker*)

2018 American Fisheries Society Meeting (Atlantic City, NJ)

- Unsupervised and supervised machine learning to classify cryptic skate species from morphometric data (*Speaker*)