

# Rola Dali, PhD

## Data Wrangler

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<https://rdali.github.io/>

## SUMMARY

Data wrangler, software developer and problem solver: a research scientist by training, I use various tools to extract actionable information from data.

## EXPERIENCE

### Bioinformatics Specialist – Tech. Dev. Team

#### Canadian Centre for Computational Genomics (C3G)

2017 - Ongoing Montreal

C3G is a research entity that provides tool development and data analysis for genomic researchers.

- Developed 3 End-to-End analysis pipelines in 30% of the expected time (Python, R, WDL)
- Automated testing and resource monitoring using Jenkins freeing up valuable team time
- Analyzed hundreds of datasets for several international projects around the globe
- Established training workshops twice a year at C3G: helped hundreds of academics in learning how to quality control, process and visualize data

### PhD candidate in NeuroScience & Bioinformatics

#### McGill University, Computer Science Department

2011 - 2017 Montreal

- Developed RobusTAD, a tool to analyze DNA 3D structure
- Designed, conducted and analyzed experiments to understand brain development and disease
- Developed software tools for collaborators to view and analyze data
- Met regularly with team members and collaborators to present and explain findings

### Research Intern

#### Palmerston North University

2010 - 2010 New Zealand

- Analyzed data in the laboratories of Dr. Barry Scott and Dr. Murray Cox to understand the relationship between fungus and plants, which is important for New Zealand's economy

### Research Intern

#### University of Ottawa

2009 - 2010 Ottawa

- Collected & analyzed Data in the laboratory of Dr. Mona Nemer, **current Chief Science Advisor of Canada**, to understand heart development & disease

## ACHIEVEMENTS



### Top Performer

- Rated "Exceptional" in annual review



### Academic Research & Open Source contributor

- Co-authored 16 scientific articles (Dali R in Pubmed, BioRxiv, and arXiv)
- Contributed to several Open source Code bases: RobustR, GenPipes, MultiQc, HiCUP



### Thinker

- Ranked in top 10% in Canadian national competitions



### Productive & Efficient

- Passionate problem solver that completes projects in a fraction of the allocated time

## STRENGTHS



### Organized Modular Solver

- I am very good at debugging problems by breaking any issue into smaller, more manageable pieces. Thus, I am not easily intimidated by new tasks



### Communication Skills

- Good communicator: able to extract & convey information effectively



### Eye for detail

- Detail oriented, consistent processing & execution



### Experienced Writer

- Very Good at writing data analysis reports & project grants

## EXPERIENCE

### Research Intern

University of Ottawa

📅 2008 - 2009 📍 Ottawa

- Collected & analyzed data in the laboratory of Dr. Rees Kassen to understand bacterial and fungal evolution

## SELECT PROJECTS

### Insurance Estimator using Montreal Fire Department Data

Built an insurance pricing estimator based on estimating fire risks across Montreal

### Computer Vision: arithmetic operations

Developed a Feed Forward Neural Network using Keras to identify and solve arithmetic operations in images

### Language Classification by Character Freq.

Developed a Random Forest classifier that can predict language based on character frequency

- Scraped various Reddit pages in different languages and used NLP to clean and extract language features
- Tested and trained several different classifiers using SciKit Learn

## INDUSTRY EXPERTISE

### Software Developer



### Data Science



### Statistics & Math



### Data ETL



### Data visualization



## FIND ME ONLINE



GitHub

[www.github.com/rdali](https://www.github.com/rdali)



Personal Site

<https://rdali.github.io/>



LinkedIn

<https://www.linkedin.com/in/rola-dali-phd-63b7133a/>

## SKILLS

### Software & Coding

Python R Java Bash SQL

HPC/Cloud git/Jenkins

### Data Wrangling

Quality Control Data Analytics

Pipeline Development

Data Visualization Math & Statistics

Large Data

## EDUCATION

### Certificate in Data Science and Machine Learning

GPA

4.0 / 4.0

McGill University

📅 2018 - 2019

### PhD in Neuroscience & Bioinformatics

GPA

4.0 / 4.0

McGill University

📅 2011 - 2017

### Honors & specialization in Biochemistry

GPA

9.8 / 10

University of Ottawa

📅 2006 - 2010

## MY LIFE PHILOSOPHY

*"We are what we repeatedly do. Excellence, then, is not an act, but a habit."*