

João Moreira

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skills

modeling

Machine learning
Time-series analysis
Maximum likelihood
Sampling methods
MCMC
Hypothesis testing
Map-reduce

development

Python | 5+ yrs
bash | 5+ yrs
git | 4+ yrs
C++ | 2+ yrs
R | 6 mos

tools

Django
numpy
scipy
pandas
scikit-learn
matplotlib
requests
Beautiful Soup

databases

MySQL | 5+ yrs
MongoDB | 4+ yrs

web design

HTML5
CSS3
Less & Sass
Javascript
D3

education

Ph.D. Chemical Engineering, Northwestern University 2012–2017

Thesis: *The Effect of Gender Diversity in Creative Teams*

M.Sc. Physics, University of Lisbon, Portugal 2009–2011

Thesis: *Evolutionary Dynamics of Cooperation in Multiplayer Games*

B.Sc. Physics, University of Lisbon, Portugal 2006–2009

experience

Data Scientist & Instructor

Northwestern University

Jan. 2012–Sep. 2017

- Used maximum likelihood estimation to parameterize the distribution of the impact of scientific publications (~1TB dataset)
- Constructed a Django web application with interactive D3.js visualizations to showcase my data-driven ranking of scientific research: <http://forecite.us>
- Demonstrated the existence of historical gender discrimination in the movie industry by performing time-series analysis on IMDb metadata of +15k movies
- Created and delivered original course materials on web-scraping and object-oriented programming to over 100 students in 2 sessions of a 1-week long Python programming bootcamp
- Organized and led discussion groups, and graded homeworks for all students in 4 undergraduate courses
- Mentored 2 younger graduate students and 2 high-school interns on the principles of scientific research and basics of programming

Data Science Intern

GadflyZone

Apr. 2016–Sep. 2016

- Constructed MySQL database of patents on Amazon Database Relational Services built from publicly available patent information
- Used natural language processing and citation analysis to design a multidimensional scoring engine to predict a company's innovativeness

Software Engineer

Narrative Science

Jun. 2014–Sep. 2014

- Developed Python tools to automatically gather and perform statistical analysis of stories written by Quill, Narrative Science's patented artificial intelligence platform
- Used Quill to collect the most relevant metrics from the stories' analysis and to generate an email report that produced insight about the inner workings of the platform