Tomás Capretto

Doctorate Candidate

IMASL/CONICET

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Statistician interested in R, Python, R Shiny and anything that helps to make data analysis more pleasant

Education

Universidad Nacional de Rosario   *Rosario, Argentina*
Doctorate in Statistics   *2019-2024 (expected)*
- I work under the supervision of PhD. Osvaldo Martin on Bayesian statistics and exploratory data analysis.
- My goal is to create tools to help practitioners to understand and apply statistical methods and data analysis techniques with more ease.

Universidad Nacional de Rosario   *Rosario, Argentina*
Bachelor in Statistics   *2014-2019*
- The career gave me a solid background in foundations of statistics as well as the ability to interpret results in an analytical manner.

Research experience

Universidad Nacional de Rosario   *Rosario, Argentina*
Research assistant   *Apr 2018 - Mar 2019*
- **Project:** Statistical methods in official statistics.
- Wrote my undergraduate thesis *Estimation in complex survey samples in presence of nonresponse* under the supervision of MSc. Gonzalo Marí.

Universidad Nacional de Rosario   *Rosario, Argentina*
Research assistant   *Apr 2016 - Mar 2017*
- **Project:** Sampling designs based on models for populations with spatial variability.
- As a complement of a course in sampling techniques, I dedicated most of the time to the study of new sampling methods that incorporate spatial variability.

Work experience

AlixPartners   *Buenos Aires, Argentina*
Consultant   *Nov 2018 - Jan 2019*
- Data manipulation and analysis using R, Python, SQL and Tableau.
- Time series forecasting.
- Task automation.

Instituto Nacional de Estadística y Censos   *Buenos Aires, Argentina*
Statistical assistant   *May 2018 - Oct 2018*
- I worked on the study of non-response, its classification and treatment.
- Contributed to methodological manuals and internal reports.
- Evaluation of methods to impute missing data.

Universidad Nacional de Rosario   *Rosario, Argentina*
Statistical assistant   *Jul 2016 - Sep 2016*
- Survey sampling study to study characteristics of members from a professional college in Santa Fe province.
- Participated in the strategy to collect the data.
- Worked on the consistency of the data bases and the generation of internal reports.
- Worked on telephone surveys and cases follow-up.

Training experience

Chegg Tutors *Remote*

ONLINE TUTOR *Aug 2018 - May 2019*

- Tutored Statistics, R and SAS Programming, and related topics in English.
- I worekd with both undergraduate and graduate students from a very wide range of disciplines.

Latinhire *Remote*

ONLINE TUTOR *Nov 2015 - Nov 2018*

- Tutored Statistics both in English and Spanish.
- Worked with both high-school and undergraduate students.

Software development

All of my public software develpment can be found in my github profile.

PYTHON

2020 -	**ArviZ**: Contributor A package for exploratory analysis of Bayesian models.
2020 -	**Bambi**: Contributor A a high-level Bayesian model-building interface.
2020 -	**formulae**: Author A WIP library that implements model formulas as in R lme4 package.

R

2020 -	**latex2r**: Author Translate math formulas written in LaTeX to R code.
2020 -	**shinymath**: Author A new mathematical input for Shiny apps.

R SHINY

2021	**samp**: Author Visualize sampling distributions of several statistics generated from arbitrary mixtures of probability distributions.
2021	**ifuns**: Author Interactively tune and visualize univariate mathematical functions.
2020	**sdeshiny**: Author An interface for a system of differential equations solver.

Scholarships, awards and distinctions

CONICET *San Luis, Argentina*

DOCTORATE SCHOLARSHIP IN STRATEGIC TOPICS *2019 - 2024*

- **Topic:** Exploratory analysis of Bayesian methods.
- Full-time position dedicated to study and research.

Grupo Argentino de Biometría *Rosario, Argentina*

1ST PRIZE IN THE XIII YOUNG BIOMETRISTS CONTEST *Oct 2017*

- I worked with David Presutti, Agronomic Engineering student.
- We used generalized mixed linear models to solve the proposed problem.

Comisión Fulbright Argentina *Austin, United States*

FULBRIGHT SCHOLAR *Jan 2017 - Feb 2017*

- I made a stay in the University of Texas at Austin thanks to the scholarship Friends of Fulbright 2017.
- The activities involved english training, cultural exchange, volunteering and I also attended classes in Statistics.