Karina Rojas
Data scientist | Researcher

Data scientist with 10 years experience in research: data processing, machine learning and deep learning, analysis and model fitting as well data catalog manipulation and utilization of SQL queries.
Member of international collaborations as EUCLID consortium and LSST-UK Junior Associate as well DSFP-LSST Data Science Fellowship Alumni.
Commited, enthusiastic learner and open-minded.

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Krojas

https://drkarinarojas.com/

Resident permit B, right to work

Work Experience

University of Portsmouth | Fellow researcher
Oct 2021 - To date | Institute of Cosmology and Gravitation, Portsmouth, UK.
- Design, execution and statistical analysis of an innovative experiment to evaluate the performance of humans and neural networks in image classification tasks.
- Train a neural network (autoencoder) for efficiently extract specific features in a large dataset of images.

Ecole Polytechnique Fédérale de Lausanne | Posdoctoral researcher
Oct 2018 -Sep 2021 | Laussane, Switzerland.
- Classification of images using convolutional neural networks.
- Participation in the development of an automatic modeling pipeline and the development of a visualization tool.
- Mentoring graduate students in their project and/or master thesis and weekly colloquium organizer.

LSSTC Data Science fellowship | Alumni 2nd cohort
2017-2019 | United States
- This program consisted of six weeks with one-week schools over a two years period. The topics covered were:
  - Statistics, Image processing, Time domain analysis, Machine learning and software engineering, Scalable software and data storage, time series analysis.

Universidad de Valparaíso | Doctoral researcher
2014-2018 | Valparaíso, Chile.
- Develope of a pipeline for complex time series analysis to indirect measure astronomical features, a code for spectral analysis and the application of machine learning techniques for clustering.
- Several nights observing at different telescope. The task performed include: night planning, telescope preparation, observing targets and calibration images, and solving technical problems.

Star Tres | Co-founder
2013-To date | Online.
- Astronomical social media content creation for general public, with the purpose of education and women in science visualization.
- Execution of public talks and workshops in low incomes schools in Chile.

Relevant Skills
Programming
SQL.
Python: Numpy, Pandas, Matplotlib, Scipy, Sklearn, Tensorflow, Pytorch, Astropy.
Libraries/Platforms
Spyder, Jupyter Notebooks, Latex, Github, Slack.
Communication
Project management, supervision, public speaking, talks in international conferences, outreach events and content creator.
Languages
Spanish (Native). English (C1).
German (B1 enrolled). French (A2).

Education
Ph.D. in Astrophysics
2014-2018 | Universidad de Valparaíso.
MSC in Astrophysics
2012-2014| Universidad de Valparaíso.
Bachelor in Physics
2007-2011 |Universidad de Valparaíso.

Achievements
Awards
2018 | "100 Young Chilean Leaders".
2015 | "Graduate Student Prize Lecture".
Grants
2020 | IAU-OAD outreach project.
2017 | LSSTC Data Science Fellowship.
2017 | CONICYT Ph.D. grant.