Explainable Machine Learning

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Nationality	Swiss - Argentine
Languages	English C1 | French C1 | Spanish C2
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Causal reasoning. Computer science. Social anthropology.

- Causal reasoning based on the Bayesian approach of probability
- Fluent teamwork within interdisciplinary groups
- Development of open, reproducible and auditable software
- Mathematical specification of imprecise causal arguments
- Efficient computation through distributed algorithms
- Determination of the value of competing causal models
- Scientific reports accessible to diverse audiences

Work experience

2016 – *Graduate teaching assistance in Computer Science* – Buenos Aires University
Master's thesis director in Computer Science and Seminar on Bayesian Inference.
Teaching activities in various courses at the Computer Science degree.

2016 – 2022 *Doctoral Fellowship in Computer Science* – Instituto de Ciencias de la Computación
Artificial Intelligence Lab and High Performance Computing Lab.
Bayesian analysis of learning in video game communities (defense 2023)

2015 – 2016 *Coordinator* – National Audiovisual Audience Measurement System
Coordinator of the areas of social sciences and computer technical support.
Administration of the database and the automatic survey system.

2014 – 2015 *Junior Data Engineer* – High Performance Computer Lab.
Support for researchers. Distributed computing. Parallel programming. Relational database.

2012 – 2013 *Social work* – Ministerio de Desarrollo Social, Argentina
Impact evaluation of public policies. Ethnography and community action.

2008 – 2016 *Data Scientist* – Grupo Antropocaos
Formal methods in social sciences. Simulation and predictive models. Online bets.

Association *Co-founder* – Bayesian Methods Laboratory
Organization of the first Plurinational Bayesian Congress (bayesdelsur.com.ar) in Latin America.
Specification and evaluation of alternative causal models for optimal decision making.

Software tools Julia (Turing, ...), Python (PyMC3, Scipy, Sklearn, Pandas, Numpy, TensorFlow, Virtualenv, ...), R (Stan, ...), C# (Infer.NET), C++ (MPI), Haskell, Bash (screen, ssh, vi, rsync, awk ...), SQL, NoSQL (Kafka, Neo4j), Git, Docker, Latex (Tikz), Html, ...

Education Universidad de Buenos Aires

2016 – 2022 PhD in **Computer Science.** (Defense 2023)

2012 – 2015 Licentiate in Computer Science. (Suspended after promotion to PhD)

2005 – 2009 Licentiate (BSc + MSc) in **Anthropological Sciences**.

Teaching Buenos Aires University

2020 – *Bayesian Inference* (with `C#`, `Julia`, `Python` and `R`). Faculty of Exact and Natural Sciences.

2019 – *One-on-one mentoring*. Director of master's thesis in the Department of Computer Science.

2019 – 2019 *Algorithms and data structures I* (with `C++`). Department of Computer Science.

2018 – 2019 *Introduction to Computer Science* (with `Python`). Department of Computer Science.

2018 – 2018 *Computational Social Science* (with `R`). Departments of Anthropology and Computer Science.

2016 – 2017 *Functional programming* (with `Haskell`). Department of Computer Science.

2010 – 2010 *Artificial Societies and Ethnography* (with `Netlogo`). Department of Anthropological Sciences.

Scientific research

Articles

○ Landfried, G., Cairo G., Mocskos E. *Exploring the effect of network structure on individual learning: a longitudinal study of an online Go game community*. Github 2022. Download.

○ Landfried, G; *The multiplicative nature of evolutionary and probabilistic selection processes as the general driver for emergence of cooperation and specialization*. Github 2022. Download

○ Landfried G., Mocskos E. *TrueSkill Through Time: reliable initial skill estimates and historical comparability in Julia, Python and R*. In review at Journal of Statistical Software. Github 2021. Download.

○ Landfried, G; Fernandez Slezak, D; Mocskos, E: *Faithfulness-boost effect: Loyal teammate selection correlates with skill acquisition improvement in online games.* PLoS one. 2019.

Events

2022. Computer Science Research Day. Université de Buenos Aires, Argentine. **Poster**

2019. 3rd ESLR. Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany. Poster.

2018. Machine Learning Summer School, MLSS. Torcuato Di Tella University, Argentina. Poster.

Software

The state-of-the-art skill estimator: `github.com/glandfried/TrueSkillThroughTime`