YAIR BARNATAN

Data Scientist | Biological Sciences PhD

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EDUCATION

- **MSc in Data Mining and Knowledge Discovery** - Universidad de Buenos Aires (2025 - current)
- **PhD in Biological Sciences** - Universidad de Buenos Aires (2017 - 2024)
- **Licentiate in Biological Sciences** - Universidad de Buenos Aires (2010 - 2017)

TECHNICAL SKILLS

- **Programming languages:** Python (scikit learn, pandas, numpy, geopandas, matplotlib, seaborn), R (tidyverse, ggplot2, shiny), SQL, HTML + CSS.
- **Machine Learning:** classification and regression (Random Forest, KNN, SVM, logistic regression), Clustering (K-Means, Hierarchical, DBSCAN).
- **Applied Statistics:** t-test, ANOVA, linear/multiple/categorical regressions, repeated measures analysis, dimensionality reduction (PCA, t-SNE), MANOVA, GLMMs, correspondence analysis, basket analysis, network analysis.
- **Tools:** Excel, Git + Github, R-Shiny, R-Markdown, Jupyter, MS Teams.

WORK EXPERIENCE

Clinical data coordinator II - ICON plc (2024 - current)

- Supports activities related to development of the clinical data management systems
- Performs data review tasks, including validation and analytics for clinical trials
- Ensures that clinical data meets the established data integrity standards.
- Therapeutic area: oncology for studies in Phases I, II and III.

Clinical trial coordinator I - PPD, part of Thermo Fisher (2024)

- Perform review and quality checks on essential clinical trial documents
- Supports the maintenance of study-specific documentation and systems.
- Maintains communication with sites per amendments.
- Therapeutic areas: oncology and cardiology for studies in Phase III.

PhD in Biological Sciences - Universidad de Buenos Aires (2017 - 2024)

- Development, design and execution of research projects in visual neuroscience.
- Statistical analysis and modeling. Data processing and interpretation.
- Built a workflow using Python and R to process raw data from a custom-made behavioral set-up to plotting graphs, statistical analysis and figure preparation.
- Research publication in international journals and conferences.

Invited Researcher - Newcastle University, UK (2017, 2022)

- Design and execution of project on electron microscopy techniques applied to a biological model.
- Experimental protocol optimization

PROFESSIONAL DEVELOPMENT

- Introduction to Data Science - Coursera
- Data Science with R (96hs) - UBA
- Python Programming (64hs) - UNSAM
- Full stack programming with Python
- Multivariate calculus for Machine Learning - Coursera
- Linear algebra for Machine Learning - Coursera
- Introduction to Bayesian statistics (40hs) - UBA
- Linear and mixed models with R (96hs) - UBA
- Biometry II (160hs) - UBA

LANGUAGES

- Español: Native
- Inglés: Professional Proficiency (written and spoken)
- Hebreo: Advanced (written and spoken)

PUBLICATIONS

- **Barnatan Y** et al (2025). "The Synaptic Complexity of a High-Integration Lobula Giant Neuron in Crabs". J Comp Neurol.
- **Barnatan Y** et al (2022). "Matched function of the neuropil processing optic flow in flies and crabs: the lobula plate mediates optomotor responses in Neohelice granulata". Proc Royal Society B.
- **Barnatan Y** et al (2019). “Unidirectional optomotor responses and eye dominance in two species of crabs”. Front in Physiol.