

# Arturo J. Ossorio Arana

## Ecohydrologist | Data Scientist

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### ABOUT ME

I love building things, tinkering with new tools, and learning new concepts. I find the process of dissecting a problem, analyzing the different components and evaluate possible solutions (with its trade-offs) extremely stimulating, especially when tackling complex, cross-functional problems with tangible outcomes.

Looking for new challenges within the data spectrum. Particularly interested in the intersection between data science and ecohydrology or freshwater issues.

### EDUCATION

**MSc., Ecohydrology (Part-time)**  
Universidad Nacional de la Plata (UNLP)  
Thesis pending  
Expected Graduation Date: 2023

**BEng. + MEng, Civil Engineer**  
Universidad de Buenos Aires (UBA)  
Graduated 2018

### SKILLS

**Python**  
*pandas, numpy, scikit-learn, geopandas, request, matplotlib, seaborn*

**Data-related tools**  
*Git, SQL, PostgreSQL*

**GIS and Remote Sensing**  
*QGIS, Vector & Raster Data, DEM, Watershed Delineation*

**Maths**  
*Probability, Statistics, Combinatorics, Linear Algebra, Calculus*

**Ecohydrology & Freshwater Ecosystems**  
*Water Balance, Hydrograms, Eutrophication, Nutrient Budgeting, Lake Management*

### OTHER ACTIVITIES

*Fly Fishing, Amateur Radio, Reading, Cooking, Traditional Folk Music, Guitar, Soccer, Skiing*

### EXPERIENCE

**Python Programmer | Data Analyst @ Confidential client**  
**Jun. 2022 - Present | Freelancer (through Upwork)**

- Contributed to develop codebase for photovoltaic (solar) plant analysis project.
- Experience with data libraries (pandas, numpy), data visualization libraries (matplotlib, plotly), pipenv and git.
- Worked as a freelancer in an autonomous manner, with regular meetings to plan weekly development plan.

**Limnologist | Data Analyst @ EcoAqua**  
**Mar. 2021 - Present | Argentina (Remote)**

- Consistently delivered limnological reports of client's water bodies, preventively identifying negative trends in key water quality parameters and evaluating possible solutions
- Revamped reporting process, decreasing total delivery time by 45% while decreasing errors.
- Performed analysis on water data, identifying regional and seasonal differences in key variables as well as potential correlation between lake, watershed and limnological parameters.

**Biology Project Manager @ EcoAqua**  
**Feb. 2020 - Feb. 2021 | Buenos Aires, Argentina**

- Diagnosed and treated for algae, submersed, floating and shoreline weeds and any other unwanted vegetation and water quality issues.
- Implemented new budgeting process based on limnological and operational factors, increasing revenue by 27%.
- Developed new workflow for solving customer's complaints, improving client retention rate by 30%, ensuring response of every request on time.

**Aquatic Specialist @ EcoAqua**  
**Jun. 2017 - Jan. 2020 | Buenos Aires, Argentina**

- Managed five 2-people teams guaranteeing all services were completed on schedule. Devised and executed monthly and weekly schedules.
- Maintained 500+ acres of customer's lakes, providing superior quality service, fulfilling of all customer needs leading to 42% complaint reduction.
- Formulated and standardized maintenance routine for vehicles, machinery and tools, decreasing workflow interruptions by 60%.

### PROJECTS/PUBLICATIONS

**Test Elaboration on Pandas to Evaluate Candidates for Different Roles**

- Created 50 scenario-based questions on Pandas, designed to test the situational judgement of the candidates. Reviewed and corrected 50+ previous questions made by another expert.

**EDA on Argentine Lakes and Reservoirs dataset**

- Obtained Carlson's trophic state index (TSI) for waterbodies in dataset of Argentine lakes and reservoirs. Analyzed differences between natural and man-made waterbodies and the role of latitude and depth in eutrophication.

**Python-Generated Resume**

- Using FPDF library, created the present resume entirely with Python.