

# Arturo J. Ossorio Arana

## Ecohydrologist | Data Analyst

arturoa91@gmail.com | ajossorioarana.github.io | linkedin.com/in/ajossorioarana

### 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 evaluating possible solutions (with their 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

**M.Sc., Ecohydrology (Part-Time)**  
Universidad Nacional de la Plata (UNLP)  
Thesis pending

**B.Eng. + M.Eng, Civil Engineer**  
Universidad de Buenos Aires (UBA)  
Graduated 2018

### SKILLS

- Programming and Databases**  
*Python, version control (git, gitlab, github), virtual environments, SQL*
- Data Analysis and Visualizations**  
*pandas, numpy, scipy, geopandas, plotly, matplotlib, seaborn*
- GIS and Remote Sensing**  
*QGIS, Vector & raster data, DEM, Watershed delineation*
- Ecohydrology & Freshwater Ecosystems**  
*Water cycle, Water balance, Hydrograms, Eutrophication, Nutrient budgeting, Lake management*
- Maths**  
*Linear Algebra, Calculus, Probability, Statistics, Combinatorics*

### OTHER ACTIVITIES

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

### EXPERIENCE

- Python Programmer | Data Analyst @ HK Analytics**  
**Jun. 2022 - Aug. 2023 | Remote (Freelancer) - Part-Time**
- Contributed to the development of the codebase for photovoltaic (solar) plant data science project.
  - Worked daily with data libraries (pandas, numpy), data visualization libraries (matplotlib, plotly), virtual environments (pipenv) and version control (git).
  - Worked as a freelancer in an autonomous manner, with regular meetings to plan development efforts, assess results, and collaborate with each other's hurdles.
- Limnologist | Data Analyst @ EcoAqua**  
**Mar. 2021 - Present | Argentina (Remote) - Part-Time**
- 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

- Analysis of Trophic State of 103 Argentinian Lakes and Reservoirs**
- Obtained Carlson's trophic state index (TSI) for water bodies in a dataset of Argentine lakes and reservoirs. Analyzed the differences between natural and man-made water bodies and the role of latitude and depth in eutrophication.
- EDA in Amateur Radio Licenses Numbers Across Argentina**
- Analyzed the distribution of amateur radio licenses across Argentina and cross-referenced it with other variables to uncover the reasons behind this distribution.
- 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.