Joseph P. Fernandez

fernajp@uc.edu · 440-429-2220 · Cincinnati, OH

josephpfernandez.com · LinkedIn

Summary

Data Scientist with 3+ years of experience at P&G Digital Accelerator, specializing in predictive modeling, machine learning, and data analytics pipelines. Developed Python-based tools and Streamlit apps to optimize R&D, reducing experimental costs by 20–50% and timeline by 90%. Proficient in Python, pandas, numpy, and high-performance computing (Unix). Seeking data science roles in biotech, environmental tech, or consumer goods.

Skills

- *Data Science*: Python (pandas, numpy, matplotlib, Jupyter), Machine Learning (JMP), Predictive Modeling, Data Visualization, Streamlit

- *Computing*: High-Performance Computing (Unix, Bash), Web Development, Markov Chain Algorithms

- *Domain Expertise*: Computational Chemistry, Statistical Analysis, Materials Modeling

Professional Experience

Postdoctoral Research Fellow, P&G Digital Accelerator, University of Cincinnati   2022–Present

- Built machine learning pipelines (Python, Jupyter) to predict material properties, achieving R^2 ¿0.8 for 100+ datasets, cutting experimental costs by 20–50%.

- Developed and deployed a Streamlit web app for predictive analytics, adopted by 10+ team members, reducing testing time by 90%.

- Designed data analytics workflows to process large-scale polymer datasets, enabling sustainable product development.

- Implemented Markov chain algorithms for predictive modeling, improving accuracy across diverse datasets.

- Authored technical reports on data-driven methodologies, supporting cross-functional teams and IP capture.

Graduate Research Associate, The Ohio State University   2017–2022

- Developed Python-based data pipelines for high-throughput analysis, screening 100+ datasets and reducing processing time by 30%.

- Created data visualization tools (matplotlib) to analyze material properties, guiding research strategies.

- Contributed data analysis to publications in *Environ. Sci. Technol.*, advancing materials science research.

Staff Teaching Associate, The Ohio State University   2011–2013, 2016–2017

- Developed instructional materials and lab experiments for General Chemistry and Organic Chemistry, mentoring 20+ undergraduate teaching assistants to ensure high-quality course delivery.

- Delivered in-person and virtual instruction, enhancing student understanding through clear communication.

- Designed and graded coursework, fostering analytical skills in 100+ undergraduates per semester.

Student Research Associate, The Ohio State Medical Center, Leukemia Tissue Bank   2008–2011

- Processed and analyzed biological datasets (DNA, RNA, protein), supporting clinical research studies.

Education
The Ohio State University
Ph.D., Organic Chemistry (Computational Chemistry Focus)   2017–2023
B.A., Chemistry with Honors   2007–2011
B.A., Philosophy with Honors   2007–2011

Selected Publication

- Scott, S.; Fernandez, J. P.; et al. *Environ. Sci. Technol.* 2022, 56(2), 951–961.

Awards

- John S. Swenton Award for Outstanding Teaching, 2021
- GAANN Fellowship, U.S. Department of Education, 2019

Professional Affiliations

- American Chemical Society