Joseph A'Hearn, PhD

Data Scientist

(630) 865-7862
Port Orchard, WA
josephahearn3@gmail.com
https://github.com/jahearn3
https://www.linkedin.com/in/josephahearn3

Summary

- Self-driven data scientist with experience as the technical lead and support on building AI/ML-enabled business products and with expertise in modeling and numerical simulations of dynamical systems as evidenced by 4 peer-reviewed scientific publications and participation in 2 successful Machine Learning product applications.
- Problem-solving skills and extensive experience in scientific programming using Python, resulting in the completion of 11 programming-related projects.
- Strong oral and written communication skills with an ability for data storytelling in both analytical and concise formats to both technical and non-technical audiences, as evidenced by 50 successful presentations and talks, including an award-winning poster.

Experience

Data Scientist **06/2022 — Present**
PACCAR Information Technology Division *Renton, WA*

- Rebuilt the PACCAR Pricing Tool, including restructuring and rewriting Python and SQL code, documentation, implementation of DVC (Data Version Control from Iterative AI), replacement of Machine Learning algorithms, and overseeing the development of improved Tableau dashboards for overall improved performance and increased trust from stakeholders.
- Worked on active development and support for PACCAR's Warranty AI Auto-Adjudication, which includes regression, classification, and clustering models to automate some decisions and otherwise provide decision support for warranty analysts by giving statistical context and flagging anomalous warranty claims.
- Implemented an end-to-end Machine Learning project pipeline, fetching data from Snowflake, predicting interest rates using a Decision Tree Regressor, running the code on a GCP instance, versioning the project with GitHub and DVC, running it on GitHub Actions, and setting up an API endpoint.
- Experimented on my commuting data with various techniques for data processing in Pandas and for regression problems in Machine Learning, including seasonality studies.

Astronomers Turned Data Scientists of the American Astronomical Society

- Co-organized the 5th annual Astronomers Turned Data Scientists hybrid meeting in January 2023, including inviting speakers and arranging the social event.
- Spoke as a panelist at the American Astronomical Society's June 2023 Careers in Data Science panel discussion.
- Co-founded as co-host and editor the Astronomers Turned Data Scientists podcast, released monthly starting in January 2024.

Planetary Scientist **01/2017 — 06/2022**
Research Assistant in Physics at University of Idaho *Moscow, ID*
and Summer Research Intern at NASA Jet Propulsion Laboratory *Virtual*

- Built models in Python using advanced mathematical tools such as differentiation, integration, Fourier analysis, Gaussian elimination, and least-squares optimization for regression models to assess system stability and aid mission planning through 12 projects.
- Developed algorithms for optimization, regression, and classification problems to propel innovative ideas and test hypotheses, leading to the publication of 4 peer-reviewed scientific papers, 3 as first author.
- Presented results, including 5 novel discoveries, to the scientific community using data storytelling techniques through 2 invited talks and 15 conference presentations.

Certificates

Neural Networks and Deep Learning, *Coursera*
Data Scientist Syndicate Trained Associate, *Cheeky Scientist Association*
Machine Learning Scientist in Python, *DataCamp*
Data Scientist in Python, *DataCamp*
Python Programmer, *DataCamp*
Data Analyst in SQL, *DataCamp*

In Progress:
Analytics: Essential Tools and Methods Micromasters Program, *edX/Georgia Tech*

Education

Ph.D. in Physics, *University of Idaho*, Moscow, ID, *with a focus in Astrophysics & Planetary Science* May 2022

Technical Skills

- Machine Learning (Scikit-learn, XGBoost, LightGBM, etc.)
- Python (NumPy, Pandas, Matplotlib, Seaborn, etc.)
- R
- C++
- SQL (Postgres)
- Cloud Computing (GCP, AWS)
- Git
- GitHub (Copilot, Actions)
- LaTeX
- Terminal
- Prompt Engineering (ChatGPT)
- Data Analytics
- Data Visualization
- Data Cleaning
- Forecasting
- Statistics
- Linear Algebra
- Numerical Methods
- Tableau
- Microsoft Office (Excel, Word, PowerPoint)
- LucidChart
- Jira
- Snowflake

Languages

- English (native)
- Spanish (fluent)
- Italian (proficient)
- Latin (advanced)
- Classical/Koiné Greek (advanced)

Affiliations & Hobbies

- American Astronomical Society (Astronomers Turned Data Scientists), Society of Catholic Scientists
- Chess, baseball/softball, strength training
- Continuous learning through books, audiobooks, and podcasts