

Patrick Steffanic

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Python – 6 years

PowerBI – 1 year

Collaboration with X-Functional Team

C++ – 5 years

Google Cloud Platform – 3 years

Inquisitive and Analytical

SQL – 2 years

PyTorch– 3 years

Relentlessly Positive

Docker – 3 years

Apache Spark and Hadoop – 1 year

Deep Listener

Git - 8 years

LLM Fine-Tuning & RAG– 1 year

Excellent Tech and Non-Tech Comms

Linux – 10 years

Statistical Analysis – 8 years

Problem Solver

Projects

LLM Auto-Responder for r/explainlikeimfive 2024

<https://www.linkedin.com/pulse/unlocking-power-large-language-models-eli5-llm-agent-patrick-s7ghe/>

- Deployed an LLM agent for r/explainlikeimfive, generating high-quality responses to user queries.
- Created a scalable data pipeline for ingesting posts and leveraging Wikipedia knowledge.
- Integrated LLMs with cloud infrastructure (AWS, GCP, Azure) and local GPU acceleration.

The Risk of Recurring Wildfires 2024

<https://www.linkedin.com/pulse/growing-risk-recurring-wildfires-patrick-steffanic-feije/>

- Extracted and analyzed large USGS datasets with Python and SQL to inform data-driven decisions.
- Conducted in-depth exploratory data analysis (EDA) and visualization to identify trends and patterns in wildfire growth across various categories of fires.
- Developed predictive models to estimate insurance premiums in high-risk areas, providing actionable insights.

Experience

Researcher

University of Tennessee, June 2018 - Present, Knoxville, TN

- Developed innovative data analysis techniques to gain novel insights into particle production at the LHC
- Improved model accuracy by up to 90% using advanced statistical modeling and machine learning approaches, reducing uncertainty and informing research decisions.
- Led projects that drove publication of 3 peer-reviewed papers, leveraging expertise in machine learning and data visualization to drive business outcomes (or, in this case, research impact).
- Presented research findings at conferences through engaging presentations and interactive poster sessions.

Detector Operations Manager

ALICE, August 2022, Geneva, Switzerland

- Led a team of 12 to achieve 85% data-taking efficiency, ensuring the highest possible quality of data collection and meeting critical research goals.
- Communicated key operational insights to stakeholders through clear and concise presentations and reports, facilitating informed decision-making.
- Designed and delivered training programs for crew members, empowering them with the knowledge and skills needed to perform their roles effectively.

Education

University of Tennessee, Knoxville, TN — *Physics Ph.D.*

June 2018 - May 2024 *Tennessee Graduate Research Excellence Fellowship Recipient*

Cal Poly, SLO, CA — *Physics B.S. + Mathematics B.S.*

Sept 2013 - June 2018 *Cal Poly Champion Recipient*