Viraj Nistane

Data Scientist

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Nationality: India
Nice, France

Summary

- Research/Data Engineer with Ph.D. in Theoretical Physics and hands-on experience building production-grade data pipelines using Python, SQL, and modern DevOps practices
- Skilled in efficient ETL routines, workflow orchestration, and data quality/observability; Strong research background in simulation-driven analysis and mathematical modelling
- Highly motivated to support Global Strategy and Planning team at Uber Eats through robust data solutions, forward-looking metrics that inform merchant selection, market sizing, and opportunity evaluation

Work Experience

Data Engineer || **Tough Tongue AI**, Remote
05/2025 - Present

- Designed and operated advanced ETL routines, transforming semi-structured noSQL application data to reliable analytical products in PostgreSQL, optimised for bulk data ingestion, throughput, and transformation efficiency
- Orchestrated and automated analytics workflows using *Prefect*/Cronitor (DAG-style scheduling, retries, alerts), feeding up-to-date metrics into *Marimo* dashboards supporting product, finance, and operations decisions.
- Implemented testing, logging, and basic observability on pipelines, enabling faster incident detection and more reliable, repeatable releases in a small, fast-moving team
- Delivered actionable insights on usage, retention, and system performance, directly supporting product strategy and competitive performance, while enhancing user engagement

Research Software Engineer || **Observatoire de la Côte d'Azur**, Nice, France
10/2024 - Present

- Built and maintained a user-oriented data quality-control platform (`EuclidClusterViz`), streamlining development as well as production data access and significantly boosting research turnarounds for scientific users
- Developed modular data pipelines for robust, scalable, and compliant scientific data flow, with documentation that enabled self-service use across a diverse scientific team
- Integrated CI/CD practices using *GitLab* and *Jenkins*, supporting modular development, automated testing, and seamless deployments for complex, long-running data workflows
- Designed a flexible Pipeline Processing Order (PPO) framework to orchestrate and optimize computation, ensuring reliable, dependency-aware task execution across research workflows

Doctoral/Post-doctoral Researcher || **Université de Genève**, Geneva, Switzerland
08/2019 - 09/2024

- Led simulation-driven parameter forecasting studies in large-scale astronomical collaboration, framing outputs as opportunity-evaluation analyses that compared various survey configurations and quantified their impact on scientific yield under resource constraints
- Developed a robust Python package (`HIRAXmcmc`) enabling efficient Bayesian analysis and forecasting
- Engineered and validated an advanced statistical estimator to extract weak signals from noisy spatial density data, boosting signal-to-noise by 30-38x through optimized variance reduction
- Co-developed *SERENEt*, a deep learning framework for recovering astrophysical signals from contaminated radio images, including extracting and structuring training data from external GLEAM-MWA online catalogs into reliable analytical datasets

Education

Ph.D. (Physics)	08/2019 - 06/2023	**Université de Genève**, Geneva, Switzerland
M.Sc. (Physics)	09/2016 - 04/2019	**Ludwig-Maximilians-Universität München**, Munich, Germany
B.Tech. (Engineering Physics)	07/2012 - 05/2016	**Indian Institute of Technology Delhi**, New Delhi, India

Skills

Programming	Python | Deep Learning | Machine Learning | SQL | NoSQL | Git | Bash | Jenkins | Marimo | Databricks
Libraries/ Frameworks	Tensorflow | Keras | Pandas | Scipy | Numpy | Matplotlib | Plotly | Pytest | XML | JSON | SQLAlchemy | Prefect | PyMongo | PySpark | DeltaLake | Asyncio | OOP | DevOps | Agile Software Development | SSH | Docker
HPC	Slurm | Parallel Programming | Distributed Systems | OpenMPI | GPU Programming
Others	Mathematical Modelling | Statistical Analysis | Data Visualisation | Communication | Critical Thinking
Languages	*English* (C2) | *French* (B1) | *German* (A1) | *Hindi* (C2) | *Marathi* (C2, Native)

Awards

FY2021 JSPS Fellowships for Research in Japan (Strategic Program)

References

Available on request