

Shayan Gheidi, PhD

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Education

- **PhD Physics**, Simon Fraser University, Canada (September 2017 – April 2022)
- **MSc Physics**, University of Toronto, Canada (2016 – 2017)
- **BSc Physics**, University of British Columbia, Canada (2011 – 2016)

Skills

- **Programming/Frameworks**: Python (pandas, SciPy, Matplotlib, TensorFlow, Dash / Plotly, scikit-learn), SQL, Jupyter Notebook, PostgreSQL
- **Cloud/Tools**: Google Cloud Platform (GCP), BigQuery, Cloud Run, Cloud Composer, Cloud SQL, Vertex AI, AWS (Lambda, EC2, ECS, ECR), Apache Airflow, Docker, Git (GitHub, GitLab), CI/CD pipelines, Tableau, Power BI, Excel, LaTeX
- **Quantitative**: Machine learning, regression, exploratory data analysis, statistical analysis, modelling, interpretation, and visualization of large datasets, digital signal processing, sentiment analysis, business analytics, forecasting, time series, web-scraping, dashboards and web design, natural language processing (NLP), A/B testing
- **Other**: Excellent written, verbal communication and interpersonal/social skills. Great team player with a paralleled ability to work independently and resourcefully.

Experience

- **Associate Data Scientist**, May 2022 – Present
Euromonitor International, Chicago, IL, USA
 - Trained, tested, monitored, and built complex machine learning models used to predict product attributes based on textual information scraped from retailer websites,
 - Discovered and implemented new public datasets to train and improve otherwise stagnant model performance metrics (precision/recall) by > 10%,
 - Built internal web application using Python (Dash) that allows TBs of data stored on PostgreSQL to be labeled using an intuitive web interface/dashboard,
 - In charge of high value client project involving TBs of scraped data and predictions to provide insight into the unit price and “digital” share-of-shelf of products over the past 5 years for various countries, retailers, and product categories. Due to the large scope of the project, sophisticated interpolation, outlier detection, smoothing algorithms and other statistical methods were implemented using BigQuery.
 - Developed and scaled a fully featured internal application (using Python / Dash) with an intuitive UI which includes interactions with a custom database (BigQuery and PostgreSQL), providing users with detailed statistical analysis and insights on various products. Created data pipelines using Airflow.
- **PhD Researcher**, September 2017 – April 2022
Department of Physics, Simon Fraser University, Vancouver, Canada
 - Uncovered the magnetic properties of superconducting cuprates and other quantum materials using muon spin relaxation spectroscopy (a technique closely related to magnetic resonance imaging [MRIs!]),
 - Analysis, fitting, statistical and computational modelling, visualization, simulation, regression, presentation of data. Building Python software to perform statistical analysis and regression,
 - Co-supervised undergraduate student projects.
- **MSc Researcher**, 2016 – 2017
Department of Physics/Chemistry, University of Toronto, Toronto, Canada
 - Designed, manufactured, and characterized nanotechnology-based materials (transport measurements in gold nanoparticle films),
 - Developed a Python program that analysed, fit (chi-squared regression) and classified hundreds of data files to generate a visual summary of nanotechnology-based materials phase diagrams.

Certificates

- Machine Learning with Python (**IBM, Coursera**)

Interesting Personal Projects

- **1-800 Slowed & Reverb**: A moody music processing web application written in Python (Dash, Scipy, Numpy), deployed to Google Cloud Run via Dockerfile and GitHub! Completely written and designed and deployed from scratch!

Languages: English (native), Farsi/Persian (native), French (basic)