Sina Bahrasemani

Data Scientist . Machine Learning Developer . Computational Physicist

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Summary

Experienced Data Scientist, Machine Learning Developer, and Computational Physicist, with a strong background of working in large teams and international collaborations like ATLAS Experiment at CERN (world leader in nuclear and high energy physics research); Highly skilled in Deep Learning, Machine Learning, Big Data, Cloud Computing, and Python, C++, and database Query Programming languages.

Selected Work Experience

Senior Data Scientist at Teck Resources Limited | 2020–

- Building end to end safety and optimization mining solutions
- Developing and deploying highly scalable, accurate and efficient deep learning models
- Building large-scale mixed integer programming (MIP) optimization models
- Supporting team members and continuous engagement with stakeholders to ensure efficiency in design, rollout and sustainability of the products

Data Scientist at CERN & SFU | 2016–2019

- Leading a team of about twenty researchers
- Analyzing Petabytes of proton-proton collision data from CERN to search for rare particle physics processes

Machine Learning Developer at CERN & SFU | 2014–2019

- Developing state of the art Machine Learning software (Tree-based models and Deep Neural Networks) to reconstruct elementary particles properties in search of new physics
- Leveraging *Scikit-learn, Keras, PyTorch, TensorFlow, TMVA* and other ML libraries, to build shared solutions for the entire CERN organization.

Education

Ph.D in Experimental Particle Physics | 2014–2019
Simon Fraser University (supervisor: Prof. Dugan O'Neil)

Master's Degree in Theoretical Physics | 2011–2014
Sharif University of Technology

Selected Technical & Software Skills

- Programming Languages: *Python, C/C++, SQL*
- Deep Learning Frameworks: *TensorFlow, Keras, PyTorch*
- Machine Learning Frameworks: *scikit-learn, sparkml, TMVA*
- Data Science Libraries: *pandas, numpy, matplotlib, plotly, scrapy, opencv, etc.*
- Cloud Services: *Azure, GCP, and AWS*
- Data Engineering Libraries: *Apache Spark, Airflow, Docker*

Professional Training and Certificates

- Deep Learning AI Specialization @ deeplearning.ai | 2021
- Azure Data Science Path @ microsoft | 2020
- MLOps Specialization @coursera | 2021
- Scaled Agile Framework (SAFe®) | 2021
- Python/C++ Programming @ MITX & MicrosoftX | 2017
- Machine Learning @ StanfordX & SFU | 2018

Publications

- Citations: 29714 | h-index: 96 | i10-index: 303
- Google Scholar