Sina Bahrasemani

Data Scientist . Machine Learning Expert . Computational Physicist

604-782-3734 sina.bahrasemani@gmail.com

Summary

Experienced Data Scientist, Machine Learning expert, 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

Data Scientist III at Teck Resources Limited | 2020–

- Building end to end safety and optimization mining pipelines in Python /SQL
- 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

- Developing complex analysis software in Python and C++ to analyze Petabytes of proton-proton collision data from CERN in search for rare particle physics processes through heavily distributed computational resources.
- Working closely with a team of about twenty researchers and leading the research

Machine Learning Developer at CERN & SFU | 2014–2019

- Developing Machine Learning software in Python (Tree-based models and Deep Neural Networks) to reconstruct elementary particles properties.
- Leveraging *Scikit-learn, Keras, PyTorch, TensorFlow, TMVA* and other ML libraries, to build shared solutions for the entire 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, BASH*
- Deep Learning Frameworks: *TensorFlow, Keras, PyTorch*
- Machine Learning Frameworks: *scikit-learn, sparkml, TMVA*
- Data Science Libraries: *pyspark, pandas, numpy, matplotlib, scrapy, opencv, etc.*
- Data Engineering Platforms: *Spark, DataBricks, Airflow, Docker*
- Cloud Services: *Azure, GCP, and AWS*

Professional Training and Certificates

- Deep Learning AI Specialization @deeplearning.ai
- Azure Data Science Path @microsoft
- Recommendation Systems with Tensorflow @google
- MLOps Specialization @coursera
- Scaled Agile Framework (SAFe®)
- Python/C++ Programming @MITX & MicrosoftX
- Machine Learning @StanfordX & SFU

Publications

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