

Bakhtiyar Ruzybayev

206 Bentley Ridge Blvd., Lancaster, PA 17602

Phone: 302-650-6420 Email: bakhtiyaruz@gmail.com

Summary

More than 8 years of experience with data analytics and solving problems with large sets of data.

Experienced with:

- Exploratory analysis, data mining and insight generation
- Presenting and communicating data findings to senior business leadership and product owners
- Building and analyzing dashboards, reports for monitoring Key Performance Indicators (KPIs)
- Python machine learning and analytics libraries (scikit-learn, NumPy, SciPy, pandas, ggplot2)
- Python, SQL, Tableau
- Building key data sets to empower operational and exploratory analysis
- Automating analyses and authoring pipelines via Bash/SQL/python based ETL framework
- PhD in Physics

Experience

Capital One (Wilmington, Delaware)

June, 2014 - Present

Principal Data Analyst / Scientist

- Agile Digital Marketing: Marketing of Capital One Digital products (Level Money, Credit Wise, P2P, Group Loop) through digital and social channels (Email, Facebook, Instagram, Pandora)
- Target segmentation and optimization for improved marketing performance with Facebook look-alike campaigns
- Built Key Data Sets from both structured and unstructured formats to empower operational and exploratory analysis
- Target Modeling for improved Net Present Value and Net Promoter Score
- Developed and managed Tableau dashboards for KPI monitoring
- Managed a team of six Data Analyst in an Enterprise wide data visualization competition (ranked second out of 42 teams)
- Implemented and managed transition to Hadoop Big Data platform. Migrated data tables from Teradata to HDFS.
- Managed and taught Python, Unix, GitHub foundation classes to Bank Data Analysts
- Improved customer matching using python fuzzy string matching for Anti Money Laundering analysis
- Developed financial institution identification and clustering, using python scikit-learn libraries, for Consumer Deposit Funds Flow
- Investigated new tools for potential use by the bank Data Analytics team: D3JS, Network graphs, Sentiment Analysis

Bartol Research Institute – University of Delaware

June, 2012- May, 2014

(Newark, Delaware)

Post-Doctoral Researcher

- Development and production of analysis tools (in C++ and Python)
- Reconstruct physical phenomena with machine learning algorithms (Neural Nets, Random Forest)
- Implemented algorithm for environmental corrections on the detector signal
- Monte Carlo simulations
- Debugging long codes (several thousands of lines)
- Processing large (several terabytes) amounts of data (with Bash, Python)
- Working on large computer clusters
- Working in a large collaboration of nearly 250 people from 39 institutions in 11 countries
- Writing scientific papers, technical documentation, and presenting results in major conferences
- Deployment of IceCube detector at the geographical South Pole, Amundsen-Scott South Pole Station

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University of Delaware (Newark, Delaware)

September, 2005 – May, 2012

Research Assistant / Teaching Assistant

- Reconstruction of Cosmic Ray energy spectrum from atmospheric air showers
- Analysis of simulated and experimental data:
 - Histogramming and graphing to view and analyze distributions
 - Curve fitting (regression analysis) and minimization of functionals
 - Multivariate data analysis
 - Statistical analysis
 - Feature extraction
- Teaching introductory physics courses

Computer Skills

Proficient: **Python**, **R**, **SQL**, **Tableau**, **Teradata**, **Linux/Unix**

Familiar: **C++**, **Hadoop**, **Spark**, **Hive**, **Impala**, **MapReduce**, **D3JS**

Professional Education

Metis, Data Science Bootcamp, May 2016

Data Science Specialization, **Coursera** certificates

Analytics: Optimizing Big Data Certificate, University of Delaware, Fall 2013

Business Analyst Certificate, University of Delaware, Spring 2014

Academic Education

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|---------------------------------------|---|------------|
| • PhD in Physics and Astronomy | University of Delaware (Newark, Delaware) | June, 2012 |
| • MEd in Physics Education | Middle East Technical University (Ankara, Turkey) | June, 2005 |
| • BS in Physics | Middle East Technical University (Ankara, Turkey) | June, 2005 |

Publications

Primary Author

1. IceCube Collaboration: M.G. Aartsen et al, "Measurement of the Cosmic Ray Energy Spectrum with IceTop-73", **Physical Review D** 88, 042004, 2013

Major contributions

2. IceCube Collaboration: M.G. Aartsen et al, "Search for Galactic PeV Gamma Rays with the IceCube Neutrino Observatory", **Physical Review D** 87, 062002, 2013
3. IceCube Collaboration: R. Abbasi et al, "IceTop: The Surface Component of IceCube", **Nuclear Instruments and Methods A** 700, 188-220, 2013
4. IceCube Collaboration: R. Abbasi et al, "Observation of Cosmic Ray Anisotropy with the IceTop Air Shower Array", **Astrophysical Journal** 765, 55, 2013
5. IceCube Collaboration: R. Abbasi et al, "All-Particle Cosmic Ray Energy Spectrum Measured with 26 IceTop Stations", **Astroparticle Physics** 44, 40-58, 2012
6. IceCube Collaboration: R. Abbasi et al, "Cosmic Ray Composition and Energy Spectrum from 1-30 PeV Using the 40-String Configuration of IceTop and IceCube", **Astroparticle Physics** 42, 15-32, 2013

Co-author of 90+ papers of the IceCube collaboration.