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| Summary | | | | |
| More than 8 years of experience with data analytics and solving problems with large sets of data:   * Exploratory analysis: data mining and insight generation * Develop tools for | | | | |
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| Experience | | | | |
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| ***Capital One***  (Wilmington, Delaware) | | | June, 2014 - Present | |
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| Principal Data Analyst / Scientist | | | | |
| * Job responsibility/achievement Agile Digital Marketing: (Target segmentation and optimization) * Implementation and transition to Hadoop Big Data platform * Instructorship for Python, Big Data foundation classes * Fuzzy string matching for Anti Money Laundering analysis * Machine learning with python: clustering, support vector machines * Investigation of new tools: D3JS, Network graphs, Sentiment Analysis | | | | |
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| *Bartol Research Institute* (Newark, Delaware) | | | June, 2012- May, 2014 | |
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| Post-Doctoral Researcher | | | | |
| * Development and production of analysis tools (in C++ and Python):  Software modules to process data and reconstruct physical phenomena * Monte Carlo simulations and numerical methods * 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 technical documentation and presenting results * 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 | | |
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| Research Assistant / Teaching Assistant | | | | |
| * Statistical analysis and modeling * Analysis of simulated and experimental data:   + [Histogramming](http://en.wikipedia.org/wiki/Histogram) and [graphing](http://en.wikipedia.org/wiki/Graph_of_a_function) to view and analyze [distributions](http://en.wikipedia.org/wiki/Distribution_(mathematics))   + [Curve fitting](http://en.wikipedia.org/wiki/Curve_fitting) (regression analysis) and minimization of [functionals](http://en.wikipedia.org/wiki/Functional_(mathematics))   + [Multivariate](http://en.wikipedia.org/wiki/Polynomial#Classifications) [data analysis](http://en.wikipedia.org/wiki/Data_analysis) | | | | |
| **Computer Skills**  **Python**, R, Spark, Hive, Impala, **SQL**, **Tableau** | | | | |
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| Professional Education | | | | |
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| **Data Science Specialization,** Coursera certificates  **Analytics: Optimizing Big Data Certificate,** University of Delaware, Fall 2013  **Business Analyst Certificate,** University of Delaware, Spring 2014 | | | | |
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| Academic Education | | | | |
| * **PhD** in Physics and Astronomy | University of Delaware (Newark, Delaware) | | | June, 2012 |
| * **MEd** in Physics Education | Middle East Technical University (Ankara, Turkey) | | | June, 2005 |
| * **PhD** in Physics and Astronomy | Middle East Technical University (Ankara, Turkey) | | | June, 2005 |
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| **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***   1. IceCube Collaboration: M.G. Aartsen et al, *“Search for Galactic PeV Gamma Rays with the IceCube Neutrino Observatory”,* **Physical Review D** 87, 062002, 2013 2. IceCube Collaboration: R. Abbasi et al, “*IceTop: The Surface Component of IceCube”,* **Nuclear Instruments and Methods** A700, 188-220, 2013 3. IceCube Collaboration: R. Abbasi et al, “*Observation of Cosmic Ray Anisotropy with the IceTop Air Shower Array”,* **Astrophysical Journal** 765, 55, 2013 4. IceCube Collaboration: R. Abbasi et al, “*All-Particle Cosmic Ray Energy Spectrum Measured with 26 IceTop Stations”,* **Astroparticle Physics** 44, 40-58, 2012 5. 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. | | | | |
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| **Languages**  English, Russian, Turkish, Kazakh, Uighur  **Honors** | | | | |
| * National Science Foundation **Antarctica Service Medal**. (2012) * **Honor Rolls**, Middle East Technical University (2001-2005) * "Altyn Belgi" (**Golden diploma/medal**). High School graduation with honors, Summa Cum Laude. Top 1% nationwide. (2000) | | | | |