Kevin Ghorbani

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- Legally authorized to work in the US for any employer

Ph.D. Data Scientist

Versatile, result-driven data scientist with 10+ years of experience working with various types of data and developing exceptional data analyses in many different platforms. Proven experience in working with complex datasets in both small and large multinational teams. Avid problem solver with diverse experience, critical thinker, and a fast learner. Having the ability to adapt to new industries and transform all skill-sets. Self motivated, and able to lead a team of data scientists in order to enhance and expand the business.

CORE COMPETENCIES AND PROGRAMMING SKILLS

Quantitative Analysis • Big Data Queries • Data Mining • Statistics • Mathematics • Physics • Predictive Modeling
Data Visualization • Data Analytics • Machine Learning • Product Development • Data Processing
Problem Solving • Critical Thinking • Advanced Python Programming

Programming Languages: *Expert:* Python, C/C++, SQL, Shell script, *Prior-experience: R,* Matlab, HTML
Machine Learning Techniques: *Expert:* scikit-learn, *Prior-experience:* TensorFlow and Keras
Tools: *Expert:* NumPy, SciPy, pandas, Matplotlib, Jupyter notebook, Subversion, Git, condor, UNIX/Linux, *Prior-experience:* Flask

EXPERIENCE

WIPAC / University of Wisconsin-Madison, Madison, WI **2014 - present**
Graduate Research Assistant

- Produced an analysis and increased sensitivity for the discovery of a new elementary particle from neutrino data
- Optimized the analysis and achieved the best statistical constraints ever existed
- Cleanined noisy and inhomogeneous data and increased efficiency by over %100 using machine learning methods
- Implemented a novel technique of machine learning classifiers and identified over 12,000 neutrino events per year of data (from previously 2,000 by the collaboration)
- Developed a new reconstruction model and increased resolution by a factor of 2
- Utilized numerous statistical techniques, including sensitivity analysis, likelihood fitting, Bayesian statistics, hypothesis testing, etc.
- Worked with large datasets of O(100TB) per year, and massive computational processes on CPU and GPU clusters

Lorentz Institute, Leiden, NL **2012 - 2014**
Research Assistant

- Produced and studied complex Monte Carlo simulations for a complex cosmological model
- Created a new model and was able to explain and predict cosmic strings' behavior during interactions

Institute for Research in Fundamental Sciences, Tehran, IR **2008 - 2011**
Researcher

- Data reduction of raw images from Hubble Space Telescope and cleaned noisy data and retrieved scientific information
- Analyzed galactic image channels and determined cosmological properties via photometry
- Performed statistical analysis on cluster data and obtained dark matter properties

OTHER DATA SCIENCE PROJECTS

- ***Detector Data Calibration:*** Performed data calibration using statistical methods to adjust latest models of antarctic ice
- ***Travel Web App:*** Developed a web app (using Google maps APIs) and machine learning regressors to predict travel time at given time in New York City and achieved accuracy of few minutes
- ***Chicago Crime Analysis:*** Analyzed Chicago crime rate over 15 years of police data was able to find an explanation for the recent increase in the city's homicide rate and its relation to other police activities
- ***Teaching Programing:*** Teached Python and machine learning to graduate students and post-doctoral researchers

EDUCATION

University of Wisconsin-Madison Madison, WI
Ph.D., Physics - Data Science expected May 2018 or earlier
Leiden University Leiden, NL
M.S., Physics - Computational January 2014
Sharif University of Technology Tehran, IR
B.S., Physics July 2011