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. Great teamwork, collaboration, and communication skills demonstrated by working with over 350 international scientists in a $300,000,000 project, which resulted in more than 20 peer-reviewed publications last year. 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

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

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, UNIX/Linux, *Prior-experience:* Flask

PROFESSIONAL EXPERIENCE

Wisconsin IceCube Particle Astrophysics Center, Madison, WI **2014 - present**
Graduate Research Assistant

- Project managing by designed and executed an analysis with large neutrino datasets for discovery of a new elementary particle, resulting the most sensitive analysis ever existed for finding a solution for this hypothesis
- Problem solving by introducing a new decision making strategy to the analysis which led to 80% efficiency increase
- High-level strategic planning with experience in machine learning techniques and numerical data optimization, resulting efficiency of event selection by pattern to grow by 6 times and resolution by 2 times from the previous analyses
- Utilized of numerous statistical techniques including sensitivity analysis, likelihood fitting, Bayesian statistics, hypothesis testing, etc.
- Resource management by administering hundreds of TB of data per year, which resulted in running and monitoring to massive computational processes on CPU and GPU clusters

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

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

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

- Performed data reduction of noisy and ambiguous data of HST raw images 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
Leiden University Leiden, NL
M.S., Physics - Computational January 2014
Sharif University of Technology Tehran, IR
B.S., Physics July 2011