Saeed Mirshekari

St. Louis, MO
✆ *+1 (626) 689 5848*
✉ *saeed.mirshekari@gmail.com*
⬏ *smirs.github.io*

Summary

Ph.D. in Theoretical Physics with 7+ years of work experience in Data Science and Machine Learning including 2 years of post doctoral research in the Data Analysis team of Nobel-prize-winning LIGO. Looking for new Lead/Senior Data Scientist job opportunities.

Experienced in leading data-scientists and DS projects. Self–motivated and fast–learner. Skilled and experienced in cross-functional team collaborations, process improvement, with the ability to translate deep technical ideas and new concepts across all organizational levels. Strong skills in prioritizing and organizing with strong verbal/written communication skills. Experienced in NLP and Deep Learning with advanced coding proficiency.

Highlights

- 7+ years work experience in Data Science
- 50+ publications in top science journals
- One year DS team lead experience
- 20+ presentations in international conferences

Work Experience

Full Time Employment

- **Bayer, St. Louis, MO [Sr. Data Scientist & Data Scientist] (2017–)**
  Through leading several Data Science projects on analyzing plant breeding data from testing sites (Bayer) on one side and millions of acres of grain farms (The Climate Corporation) on another side, I helped to bring value and bridge from large scale research data to the commercial side. I also led building a centralized documentation platform to facilitate knowledge-transfer across the teams within the organization. I had the opportunity to successfully lead a small team of data scientist interns through technical projects.

- **Aclara Technologies, St. Louis, MO [Data Scientist] (2016–2017)**
  Using different machine learning algorithms, I built and evaluated predictive models for residential electricity consumption based on historical data in combination with auxiliary forecasted weather data. In separate projects, I developed web-based platforms to analyze electric distribution networks and anomaly detection via clustering algorithms. I had a major role in the development of Aclara Fault Detection and Localization's core algorithm (Bayesian Network & Information Theory) and all its data analysis [US-Patent #10401402].

- **ICTP-SAIFR, São Paulo, Brazil [Postdoctoral Research Fellow] (2013–2015)**
  As a researcher/developer in Data Analysis team of LIGO scientific collaboration, I helped developing and testing various data analysis algorithms and signal processing pipelines. I designed and performed a comprehensive, complex computational analysis to quantitatively investigate the accuracy of gravitational-wave signal template models to be used in searches for extremely weak gravitational-wave signals from compact celestial objects such as black-holes and neutron-stars.

- **Washington University in St. Louis, MO [Research Assistant] (2009–2013)**
  I did advanced research and teaching in the field of theoretical physics. In my dissertation, I obtained the equations of motion for compact binary objects such as black-holes under alternative theories of gravity beyond General Relativity. The results of this study are required by current gravitational-wave observatories such as LIGO to test fundamental laws of physics in strong gravitational field regimes such as in spaces near black-holes and neutron-stars.

Visiting Research Scholar

- **Caltech** Institute of Technology, Pasadena, CA (Mar 2015)
- **University of Wisconsin-Milwaukee**, Milwaukee, WI (Jan–Feb 2014 & Sep 2014)
- **University of Florida**, Gainesville, FL (Nov 2012 to Aug 2013)
- **Institut d'Astrophysique de Paris**, Paris (July–Sep 2012)
- **MIT** Kavli Institute, Boston, MA (Mar 2011)

EDUCATION

- Ph.D. in Physics, Gravitation & Astrophysics, Washington University in St. Louis, MO (2013)
- M.Sc. in Physics, Gravitation & Astrophysics, University of Tehran, Iran (2008)
- B.Sc. in Physics, Solid State, University of Tehran, Iran (2005)

COMPUTER SKILLS AND LANGUAGES

- Programming languages including **Python**, **R**, **MATLAB**, **C**, plus **Bash** and **SQL** [5+ years]
- Analytical and computational tools including **Maple** and **Mathematica** [3+ years]
- Web-based analytical tools including **RShiny** and **AzureML** [2+ years]
- Distributed computing via **HTCondor** and **Spark**
- Version control systems including **GIT**, **CVS**, and **TSF**
- Typesetting, documentation and report producing tools including **Sphinx** and $\LaTeX$

- Full fluency in **English** and **Persian**, basic skills in **Arabic** and **Portuguese**

CERTIFICATES IN DATA SCIENCE [MOOCs]

- **TensorFlow in Practice Specialization (2019)** including 4 courses: [1] Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning, [2] Convolutional Neural Networks in TensorFlow, [3] Natural Language Processing in TensorFlow, [4] Sequences, Time Series and Prediction. All offered by deeplearning.ai via Coursera [Workload: 4-weeks each course, Instructor: Laurence Moroney]

- **Deep Learning Specialization (2018)** including 5 courses: [1] Neural Networks and Deep Learning, [2] Improving Deep Neural Networks, [3] Structuring Machine Learning Projects, [4] Convolutional Neural Networks, [5] Sequence Models. All offered by deeplearning.ai via Coursera [Workload: 4-weeks each course, Instructor: Andrew Ng]

- **Machine Learning (2014-2015)** including 3 courses: [1] Data Science and Machine Learning Essentials; offered by Microsoft via edX [5-week, Instructors: Steve Elston and Cynthia Rudin], [2] Statistical Learning; offered by Stanford University via Dataschool.io [10-week; Instructors: Trevor Hastie and Robert Tibshirani], [3] Machine Learning; offered by Stanford University via Coursera [10-week, Instructor: Andrew Ng], Algorithms for DNA Sequencing [4-week, Instructor: Ben Langmead 2019]

- **Data Science Toolbox (2014)** including 3 courses: [1] The Data Scientists Toolbox; offered by Johns Hopkins University via Coursera [4-week; Instructors: Roger Peng, Jeff Leek, Brian Caffo], [2] Getting and Cleaning Data; offered by Johns Hopkins University via Coursera [4-week; Instructors: Roger Peng, Jeff Leek, Brian Caffo], [3] R Programing; offered by Johns Hopkins University via Coursera [4-week; Instructors: Roger Peng, Jeff Leek, B. Caffo]11111

AWARDS

2016   **Breakthrough Prize in Fundamental Physics**, *for the detection of gravitational waves.*
The Breakthrough Prize recognizes the world's top scientists. Each prize is $3 million and presented in the fields of Life Sciences (up to five per year), Fundamental Physics (up to one per year) and Mathematics (up to one per year).

A Special Breakthrough Prize in Fundamental Physics was awarded to 1015 scientists and engineers contributing to the detection of gravitational waves announced in February of 2016.

VOLUNTARY ACTIVITIES

2019 –   **Data Science Teacher**, *CoderGirl.*
CoderGirl is LaunchCode's education program designed to engage and educate women in the technology community in St. Louis.

The program includes a 24-week data-science specialized track designed to equip CoderGirls with technical skills and job-readiness skills, leading up to a apprenticeship job program. CoderGirl provides a space for women of all skill levels to learn to code in a supportive community of like-minded individuals.