

# Leila Norouzi

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An experienced and hands-on data scientist with a Ph.D. in Space Physics from the University of Newcastle. A savvy researcher who is skilled in machine learning algorithms, numerical computing, simulation, and signal processing and published more than 12 papers in scientific journals and conferences. Passionate about solving challenging business problems that have high impacts using data.

## SKILLS

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**SOFTWARES:** Python, SQL, IDL, Fortran, Matlab, Pyspark, git, Tableau, Latex

**DATA SCIENCE:** Exploratory Data Analysis, Inferential statistics, Data analyzing, Visualization, Spark, Data processing, Data storytelling, Big data, Filtering, Forecasting, Model evaluation, Data Wrangling

**MACHINE LEARNING MODELS:** Linear Regression, Logistic Regression, Classification, Clustering, Random Forest, Recommendation engineering, Dimension reduction, Time Series Analysis, Hyperparameter optimization

**PYTHON:** Numpy, Pandas, Scikit-learn, Scipy, Stat, Matplotlib, Seaborn, bokeh

## EXPERIENCE

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### SpringBoard

**Data scientist** · Jan. 2018 - Feb. 2019 · Seattle

- Successfully built and conducted various machine learning projects such as demand forecasting and system recommendation using Python
- Created parallel algorithms that can process large data sets, consist of more than 33 million entries, using feature selection techniques and clustering algorithm.
- Performed data storytelling and created effective visuals to maximize readability, comprehension, and understanding of complex datasets in Python and Tableau
- Evaluated the results of models and made adjustments to produce desired outcomes by tuning hyperparameter and estimating metrics
- Consulting to customers to design and implement a machine learning model based on their requirements and specifications
- Improved public shopping experience and future sale strategy
- Enhanced control system over business expenses

### University of Newcastle

**Research assistant and Ph.D. candidate** · Nov. 2007 - Mar. 2014 · Newcastle, Australia

- Conducted research in a world-class team of Space physicists in governmental security related project
- Presented the result of research in various national and international conferences
- Collected and process 3-years data from SuperDarn radar network, magnetometers, and satellites
- Processed, analyzed, visualized and studied data using statistical, ML and signal processing methods
- Created and implemented various numerical models and built various computer programming modules in IDL (Interactive Data Language), Python, and Fortran to conduct extensive data analysis to study properties of ULF waves propagations in the ionosphere.
- Tested the model using prepared data
- Visited Scott Base, Antarctica to calibrate and confirm the accuracy of measurement devices

### University of Newcastle, University of Sydney, Macquarie University

**Tutor and lab demonstrator** · Feb. 2009 - July 2015 · Sydney/Newcastle, Australia

- Taught multiple physics subjects at the undergraduate and graduate levels at three different universities
- Conducted Physics Labs and assisted students in completing lab reports and empowered students to achieve their academic goals.
- Adapted teaching style to the unique requirements of students to stimulate scholarly success among learners
- Prepared students for examinations by targeting weak knowledge areas of students through objective and subjective assessment
- Timely completed of assigned work and projects and assist instructors with assignments and lectures

### Subsea science and technology research center

**Coordinator/ research assistant** · May 2004 - Apr. 2006 · Isfahan

- Conducted different oceanic and subsea projects in a research team
- Identified project requirements and managing technical solutions
- Prepared technical reports using MS Project and consulted with service providers regarding available software to meet project requirements
- developed and modified technical drawings per engineering specifications in Auto-CAD
- Performed debugging and troubleshooting of Various software applications and computer programs

# Leila Norouzi

## EDUCATION

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**Springboard** · Oct. 2017 - Feb. 2019

**Data Science**

An online program consisting of 500+ hours of hands-on curriculum, with 1:1 industry expert mentor oversight, and completion of 2 in-depth capstone projects and several mini projects. The program emphasizes key concepts as followed: Python for Data Science (Pandas, Matplotlib, NumPy, Scikit-Learn, StatsModels, Scipy), Data Wrangling/Storytelling (Visualization, Exploratory Data Analysis, Data Preprocessing, and SQL), Inferential Statistics (Hypothesis testing, A/B testing, Bootstrap Resampling), Machine Learning (Linear Regression, Logistic Regression, Classification, Clustering, time-series, KNN, SVM, Random Forest, Naive Bayes, and K-means), Advanced Data Visualization (D3.js, Seaborn and Bokeh) and Big Data (Pyspark and Scala).

**University of Newcastle, Australia** · May 2008 - Feb. 2014

**Ph.D. Space physics**

**Azad University** Oct. 1999 - May 2002

**Master Physical Oceanography**

**Isfahan University** · Oct. 1994 - June 1999

**Bachelor Applied Physics**

## CERTIFICATION & PUBLICATION

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**Certifications and courses**

Certifications R Programming, The Data Scientist's Toolbox Python for Genomic Data Science Machine Learning, A -Z: Hands-On Python & R In Data Science, Intro to Python for Data Science Course, Intermediate Python for Data Science Course, Python Data Science Toolbox , Course Introduction to Data Visualization with Python, Statistical Thinking in Python , Apache Spark 2 with Python, Computer - Aided Design, Introduction to university teaching workshop, Introductory of Astrology and Astrophysics, Methods of Numerical Models of Computer-based Simulation

**Publication**

Survey of ULF wave signatures seen in the Tasman International Geospace Environment Radars data, Journal of Geophysical Research (JGR), 2015