

Mohammad Hadi Rouhani




Power System Expert and Machine Learning Developer

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HIGHLIGHTS

- Skilled renewable generation expert with over 7 years of research experience in the area of wind and solar power
- Machine Learning Developer with 2+ years of professional experience in design, development, and deployment of machine learning pipelines.
- Worked with teams of business owners, project managers, and product owners to deliver high functional ML products to stakeholders
- Expert in developing modular and reproducible software product with more than 3 years of working with Python and other programming languages

EDUCATION

- **M.Sc. in Computer Science** Sep 2020 — May 2022
 University of Alberta *Edmonton-Canada*
- **M.Sc. in Electrical Engineering** Sep 2016 — Sep 2019
 University of Alberta *Edmonton-Canada*
- **B.Sc. (with Honors - 2nd top) in Electrical Engineering** Sep 2009 — Sep 2013
 Shiraz University *Shiraz-Iran*

WORK EXPERIENCE

-  **AltaML** Sep 2022 - present
Associate Machine Learning Developer [Full-time]
development and deployment of machine learning algorithms:
 - Computer Vision
 - Government Document Pre-screening & Authentication
 - A project leading to delivering an AI product that verifies the authenticity of documents
 -  Azure Computer Vision and Cognitive Services Object detection
 - continuous integration continuous development (CICD)
 - Image text detection/classification
-  **Alberta Machine Intelligence Institute** Jul 2022 - present
Machine Learning Facilitator [Contract Part-time]
 - Support and supervise Amii's Education team on delivering workshop on AI ethics and governance.
 - Work seamlessly with the team to deliver high quality workshops for Amii's clients and partners
-  **AI4Good Lab** Apr 2022 - Aug 2022
Machine Learning Curriculum Manager [Full-time]
 - Helped organize a 7-week intensive workshop with more than 100 participants, teaching assistants, lecturers, guest speakers, industry mentors, etc.
 - Managed the ML curriculum materials from classical (supervised, unsupervised) machine learning to convolutional neural networks and reinforcement learning.

- Delivered real world problems to exhibit ML model applications in finding solutions.
- Trained talented students/participants to become the future ML startup founders from underrepresented society.






















Skills

Programming / MLOps	C, Python (scikit-learn, pytorch, tensorflow, pandas, spark, etc.), Git, Linux, Cloud computing platforms (Google Cloud, AWS, Azure)
Power System Simulation	PSCAD, PLECS, Sim Power, Cyme, DigSilent, ...
Quantitative	Algorithms and Optimization, Markov chain, Data structures, Machine Learning, deep learning
Communication	English (fluent), Persian (fluent-native), German (intermediate)

Relevant Publications

- o **M. H. Rouhani**, Omid Ardakanian, and Petr Musilek, "Robust Optimal Sizing of Solar Powered Electric Charging Stations Co-located with Energy Storage," *IEEE Power & Energy Society General Meeting (PES-GM)*, 2022 [[Link](#)].
- o **M. H. Rouhani**, M. Mohammadi, and M. Aiello, "A Fuzzy-based Soft Clustering Probabilistic Power Flow Considering Inter-Event Time Correlation", *Electric Power Systems Research Elsevier*, 107677, 2021. [[Link](#)]
- o **M. H. Rouhani**, M. Mohammadi, A. Kargarian "Parzen Window Density Estimator Based Probabilistic Power Flow Considering Correlated Uncertainties," *IEEE Transactions on Sustainable Energy*, vol. 7, no. 3, pp. 1170-1181, 2016. [[Link](#)]

Certificates

- o  Complete Guide to TensorFlow for Deep Learning with Python
- o  Complete Tensorflow 2 and Keras Deep Learning Bootcamp
- o  PyTorch for Deep Learning with Python Bootcamp
- o  Docker Mastery: with Kubernetes +Swarm from a Docker Captain
- o  Docker and Kubernetes: The Complete Guide
- o  Complete Python Bootcamp: Go from zero to hero in Python 3
- o  Python Beyond the Basics - Object-Oriented Programming
- o  Data Analysis Course with Pandas : Hands on Pandas, Python
- o  Data Analysis with Pandas and Python
- o  Linux Mastery: Master the Linux Command Line in 11.5 Hours
- o  Linux Administration Bootcamp: Go from Beginner to Advanced
- o  The Ultimate MySQL Bootcamp: Go from SQL Beginner to Expert
- o  Machine Learning
- o  Python and Django Full Stack Web Developer Bootcamp
- o  Python for Everybody Specialization
- o  Parallel Programming using GPGPU and CUDA
- o  The Data Scientist's Toolbox
- o  Introduction to HTML5
- o  Introduction to CSS3
- o  Interactivity with JavaScript
- o  Git Complete