

# Siavash Kazemi

## Resume

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### Summary

- Master of Electrical Engineering from UNB with over 8 years of experience in data science and related fields.
- Strong foundation in machine learning and computer science principles
- Experience in developing and implementing machine learning and deep learning models
- Proficient in programming in Python and experience with popular libraries such as TensorFlow, Pandas, and scikit-learn
- Experience in data preprocessing, feature selection, and model evaluation

### Technical Skills

Advanced Git, Python, Pandas, TensorFlow, Scikit-learn, OpenCV, Altium  
Intermediate VHDL, L<sup>A</sup>T<sub>E</sub>X, Matlab, C/C++, Linux, Adobe Photoshop

### Soft Skills

Strong Analytical, Teamwork, Highly Organized, Adaptability, Problem-solving, Time Management, Eager Learner.

### Related Work Experience

- 2024- to **Data Scientist**, *FIDDLEHEAD TECHNOLOGY*, Moncton, NB, Canada.  
Present
  - Collaborated on developing an optimization solution as part of a team.
  - Leveraged solvers like Gurobi and Google OR-Tools.
  - Improved algorithm performance to enhance solution efficiency.
- 2023- 2024 **Research Assistant**, *UNIVERSITY OF NEW BRUNSWICK*, Fredericton, NB, Canada.  
  - Contributed to data validation and quality assurance in a large-scale dataset.
- 2020-2023 **Research Assistant**, *UNIVERSITY OF NEW BRUNSWICK*, Fredericton, NB, Canada.  
  - Worked as part of a team on a federally funded, multi-partner project to develop the world's first pressure-based gait biometric system
  - Utilized various techniques such as pre-processing, feature extraction, and hyperparameters optimization to enhance the performance of the models
  - Implemented deep neural networks, including CNN, 1DCNN, and transfer learning techniques
  - Experience in working with Keras, Tensorflow, and scikit-learn libraries to build ML/DL models
- 2017-2019 **IT Support Specialist**, *MOEIN RAH GOSTAR KHORASAN COMPANY*, Mashhad, Iran.  
  - Train and supervise technical and non-technical staff
  - Provide guidance for purchasing of computer hardware, software, and supplies
- 2015-2017 **Electronic Engineer**, *SALMANIAN FARS CORPORATION*, Imam Khomeini highway, Isfahan, Iran.  
  - Designed and verified PCBs.
  - Worked with a variety of sensors and actuators.
  - Experienced in electronic design and integration.

- 2022-2023 **Teaching Assistant**, UNIVERSITY OF NEW BRUNSWICK, (1) Embedded System, and (2) Signals and Systems.

## Selected Projects

- 2021 Implementing several approaches for time series classification as the project of "Time Series Analysis" course under the supervision of Prof. Erik Scheme.
- 2021 Implementing five ML algorithm as the project of "Machine Learning and Data Mining" course under supervision of Prof. Huajie Zhang.
- 2020 Comparing five algorithms for image registration as the project of "Digital Image Processing" course under the supervision of Prof. Julian Meng.

## Educational Background

- 2023 **Master of Science in Electrical Engineering**, University of New Brunswick, Canada, **Courses:** Machine Learning & data Mining, Digital Image Processing, Intro to Pattern Recognition, Digital Signal Processing, Time Series Analysis, GPA – A+.  
**Title of Thesis:** Exploring Performance Limits for Pressure-Based Gait Biometrics
- 2014 **Master of Science in Communication**, Isfahan University of Technology, Iran.  
**Title of Thesis:** An Efficient Algorithm for Still and Moving Object Registration in Moving Video Camera Sequences
- 2010 **Bachelor of Science in Electronics Engineering Technology**, Shahid Rajaee Teacher Training University, Tehran, Iran.  
**Title of Thesis:** Neural Network implementation by NEFPROX in order to approximate nonlinear function to use in medical applications

## Professional Certificate

**Machine Learning**, online course by Standford University on coursera.org, Instructor: Professor Andrew Ng, [Credential Link](#).

**Deep Learning**, a 5-course specialization on coursera.org, Instructor: Professor Andrew Ng, [Credential Link](#).

- (1) Neural Networks and Deep Learning      (4) Convolutional Neural Networks  
(2) Structuring Machine Learning Projects      (5) Sequence Models  
(3) Hyperparameter tuning, Regularization & Optimization

**Introduction to Data Science in Python**, online course by University of Michigan on coursera.org, [Credential Link](#).

## Publications

- 2023 **Kazemi, S.**, Phinyomark, A., Scheme, E., SAMPLE SIZE IN FLOOR SENSOR-BASED GAIT RECOGNITION FOR SMART HOME AND ACCESS CONTROL SCENARIOS, 2023 IEEE Sensors Applications Symposium, Ottawa, Canada, Jul 18-20, 2023.
- 2018 **S. Kazemi** and M. R. Ahmadzadeh, DPML-RISK: AN EFFICIENT ALGORITHM FOR IMAGE REGISTRATION, International Journal of Engineering (IJE), In Press.

## Volunteer Work

- 2021-2022 **Executive member**, IRANIAN CANADIAN ASSOCIATION OF NEW BRUNSWICK.