

Nima (Ross) Sarajpoor

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Highlights (hyperlinks included)

• Machine Learning

- **Experienced with several libraries in Python:** TensorFlow, Scikit-learn, Numpy, Pandas, and Numba.
- **Experienced with supervised and unsupervised machine learning models** (see IEEE Journal in which a dependent elastic distance is used to preserve shape of patterns in multi-dimensional time series data)
- **Developed support for feature group in the machine learning library MLXTEND** to enhance feature selection module, particularly for categorical data (see CHANGELOG)
- **Implemented arbitrary-length anomaly detection algorithm** while reducing its computing time by providing a warm start (see MERLIN)
- **[WIP] Developing a major feature in STUMPY library to support top-k neighbors in matrix profile algorithm**, which can speed up the computation for the discovery of patterns (see PR#595 and PR#586)
- **Created RandomForestExplorer** package to extract frequent rules from decision paths of RF
- **Created tutorials in machine learning** (see POSTS)
- Familiar with **TensorFlow** for constructing deep learning models.

• Programming

- **Proficient in Python**, led lectures for a crash course on python with more than 50 participants
- Familiar with **data structure and algorithms**, ranked 5th in Programming Contest (CCPC).
- Experienced with **refactoring** (see PR#656) and **unit testing** (see PR#657)
- Experienced with version control **Git**

• Math

- **Strong quantitative reasoning**, verified an equation after fixing the typo (see the long proof here: VALMOD notebook)
- **GPA 4.0/4.0 on university-level courses on mathematics**
- **Took advanced courses:** “data mining [algorithms]”, “applied data science”, “probability and stochastic process”, and “computational statistics.” (GPA: 3.85)

Education

- **University of Calgary** Alberta, Canada
PhD, Dept. of Electrical and Software Engineering *Graduation: Oct 2022 (expected)*
- **Sharif University of Technology** Tehran, Iran
SUT is ranked 1st among Iranian Universities in Science and Engineering *2013 - 2015*

Selected Achievements and Awards

- **Programming Contest (CCPC)** Alberta, Canada
Ranked 5th in Calgary Collegiate Programming Contest 2022
- **Github Contributions** Canada
Top contributor in two open-source libraries STUMPY and MLXTEND 2022
- **Gordon Lewis Hedberg Doctoral Scholarship** Alberta, Canada
Student with Excellent Grades 2021
- **Deep Learning Certificates** Deeplearning.ai
Certificates: DL basics, hyperparameter tuning, CNN, ML project structure in DL 2021
- **Ph.D. National Competition Award** Tehran, Iran
Ranked 1st among more than 1000 participants of PhD National Exam 2016
(Afterwards, I applied to Canada.)
- **M.Sc. National Competition Award** Tehran, Iran
Ranked 6th among more than 5000 participants of M.Sc. National Exam 2013

Employment

- **Research Assistant and Teaching Assistant** Albert, Canada
Faculty of Grad Studies (University of Calgary) Current
- **Electrical Engineer** Tehran, Iran
MECO (MAPNA Group) 2016-2017

Voluntary Positions

- **Lecture Lead and Mentor in Python programming** Alberta, Canada
Schulich Ignite, University of Calgary Winter 2022- Summer 2022
- **Vice President of Grad Students** Alberta, Canada
Department of Electrical and Software Engineering 2017-2019
- **Evaluator** Alberta, Canada
IEEE award committee, Graduate Student Association 2017-2018

Soft Skills

Self-learning, problem-solving, and articulate in technical subjects

Extra-curricular Activities

Playing chess, listening to piano music, and reading philosophical books