

EDUCATION

The City University of New York, Graduate Center,
Physics (Complex Networks & Data Science) **PhD Student**
Sharif University of Technology,
Physics (Computational Physics & Chaos) **Master of Science**
University of Zanjan,
Physics **Bachelor of Science**

New York, USA
Aug. 2022 – Present
Tehran, Iran
Sep. 2019 – Jan. 2022
Zanjan, Iran
Sep. 2015 – Jun. 2019

WORK EXPERIENCE

blubank, *Data Scientist,* Tehran, Iran

May. 2020 – Aug. 2022

- Fraud detection on user debit card transactional data using isolation forests, autoencoders, and feature engineering.
- Training and stacking of several CNN architectures for face vs. ID card verification using transfer learning, face liveness detection on streaming video.
- Knowledge graph design and building, designed and developed a Neo4j database from several data sources to identify money-laundering networks, community detection, fraud detection, and recommender system.
- Marketing analysis & A/B testing, high level presentations for managers and strategic planning.
- Data engineering pipelines and automation DAGs using Apache Airflow and ETL with Python. working with different databases: Oracle, PostgreSQL, MongoDB, MySQL, Clickhouse.

Rahnema College, *Machine Learning Course Mentor,* Tehran, Iran

Mar. 2021 – Jun. 2021

- Mentored a small group of interns in machine learning for three months as a part of volunteer work.

Rahnema College, *Machine Learning Intern,* Tehran, Iran

Jan. 2019 – Mar. 2020

- 3-month training program in basics of machine learning. Final project: A recommender system for a music streaming service.

PUBLICATIONS

[Social distancing in pedestrian dynamics and its effect of disease spreading](#) *Physical Review E* (2021)

[Chaotic dynamics of active topological defects](#) *Soft Materials* (2021)

[Analysis of the ground-state energy eigenvalues of fractal quantum potentials](#) *Physica Scripta* (2019)

[Many-body effects on the radiative heat transfer in fractal nanostructures](#) *IJAA* (2017)

Translation of the book “Dark Matter & Dark Energy” by Brian Clegg to Farsi (2020)

CONFERENCES

[Social distancing in pedestrian dynamics.](#) *Dynamical Biological Systems* (2020), [COVID-19 in Iran.](#) *NetSci* (2020)

[Effectiveness of social distancing through the lens of ABM.](#) *Complex Systems Society* (2020)

RELEVANT SKILLS

Python: NumPy, Pandas, scikit learn, NetworkX, Keras, TensorFlow, PyTorch (and PyTorch geometric), graph-tool, PyMC
C++: LAPACK, OpenMP, **Matlab, R, Basic Linux, SQL & NoSQL Databases:** PostgreSQL, MongoDB, Neo4j,
PySpark, CUDA, Machine Learning: Supervised/Unsupervised/Semi-Supervised algorithms with standard libraries,
Deep Learning: Image processing with CNN, Transfer learning, Graph neural networks, Autoencoders, **Timeseries:**
Causal impact analysis, timeseries prediction algorithms for strategic planning, **Anomaly Detection, Teamwork Tools:**
Jira, Git, Confluence, **Data Reporting:** Metabase, Superset, **Data Engineering & ML Automation:** Apache Airflow,
MLOps, Python ETL

OTHER

[NTD Hackathon](#) runner-up team (report on [NPR.org](#)), TA for 5 courses during B.Sc. and M.Sc. studies, 23rd & 24th school on physics at [IASBS](#), Tehran School on Complex Networks ([TACN2018](#)) participant

LINKS

[Google Scholar](#)

[Researchgate](#)

[Linkedin](#)

[Github](#)