

Parham Moradi

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Employment

Feb. 2025 - **Research Assistant**, CS Department, *University of Saskatchewan*
Dec. 2023 - Jul. 2024 **Data Developer**, Cube10, Hybrid
Oct. 2021 - Dec. 2023 **Tech Director**, Zamineh Art Platform (Start-up), Hybrid, Tehran
Oct. 2020 - Oct. 2021 **Data Scientist**, Zamineh Art Platform (Start-up), Hybrid, Tehran

Community Involvement

Oct. 2024 - **Back-end Developer**, 65Square, *HelpUsDefend*, Remote, Canada
Oct. 2024 - **Program Assistant**, Graystone Community Association, Saskatoon
Oct. 2020 - Apr. 2024 **Data Science Fellow**, Center for Complex Networks & Social Data
Nov. 2019 - Oct. 2020 **Research Assistant**, Center for Complex Networks & Social Data

Education

2020 M.Sc., Complex Systems & Non-linear Dynamics Shahid Beheshti University
2017 B.Sc., Physics Sharif University of Technology

Professional Projects

2024 (Oct. -) **DatingSquare** 65Square APIs for client identity and subscription management
Python, Django, Web-hook, MySQL, Redis, MinIO
2024 (Oct. -) **Dashlink** A full-stack dashboard application to store links efficiently
FastAPI, PostgreSQL, Next.js, Material UI, and Telegram Bot
2024 (Oct.) **Storybook** Co.Hack, Co.Labs' 3rd Annual Hackathon, Saskatoon
React, Gemini, Stable Diffusion
2024 (Jan. - Jul.) **Data pipeline** Cube10, Maintenance Karafs' data pipeline legacy code
Python, Gitlab, ETL, MongoDB, MS SQL Server, Sentry
2024 (Jan. - Mar.) **Ninja (Crawler)** Cube10, Data mining system for real estate
Scrapy, Elasticsearch, ZenRows, Celery

Researches

2022 - 2023 **Flow & Propagation Modeling**
Studied information spread based on network structure within the political context.
2021 - 2022 **Monitoring Twitter Activity on Twelve Iran Presidential Election**
Captured social media activity during the presidential election in Iran & prepared Academic Data to initiate research.

- 2020 - 2022 The Art Genome Project**
Supported by Zamineh Content Provider Department, besides art student interns, matching the primary Iran art scene with the terms of The Art Genome Project.
- 2019 - 2020 Implement Social Media User Classification**
Used Botometer to estimate Complete Automation Probability (CAP) distribution on Farsi Twitter through crowdsourcing. Adjusted classification boundaries based on annotations and validated with Kendall's τ .

Academic Projects

- 2019 (Winter) Transformations of Ising Models**
Reviewed & reported the transition point with partition function & thermodynamic calculations based on the 1959 Michael E. Fisher article to obtain magnetic susceptibility.
- 2018 (Winter) Jacobi & Gauss-Siedel to solving Poisson Equation.**
Used the Jacobi & Gauss-Seidel iteration method in MATLAB to solve numerically Poisson Equation in the square lattice by flat density charge.
- 2016 (Spring) Spin-Orbit Coupling in Tetragonal Bismuth Bilayer**
Calculated the band structure of tetragonal bismuth bilayer (TB-Bi), which can be the candidate for topological insulators. Finally, spin-orbit coupling produces a nontrivial topological phase using the tight-binding model approach & the Slater-Koster method.
- 2015 (Spring) Monte Carlo Simulation of The Habard & Ising Model on Honeycomb Lattice**
Used Fortran to simulate & briefly study the model and using different computational techniques.

Certifications

- Sept. 2024 Google IT Automation with Python** by Grow with Google on Coursera
- **Crash Course on Python**
 - **Using Python to Interact with the Operating System**
 - **Introduction to Git and GitHub**
 - **Troubleshooting and Debugging Techniques**
 - **Configuration Management and the Cloud**
 - **Automating Real-World Tasks with Python**
- May 2024 Machine Learning** by Stanford University & DeepLearning.AI on Coursera
- **Supervised Machine Learning: Regression and Classification**
 - **Advanced Learning Algorithms**
 - **Unsupervised Learning, Recommenders, Reinforcement Learning**
- Mar. 2024 Introduction to FastAPI framework** by Duke University on Coursera
- Sept. 2024 Build a Full Website using WordPress** by Coursera Project Network
- Jul. 2024 The Work Readiness Program**
by Radius Community Center For Education and Employment Training
- Jun 2024 Being a Mindful Employee**
by Canadian Center for Occupational Health and Safety

Workshops & Conferences

- 2022** (Summer) **Sixth IPM Advanced School on Computing & AI**
by School of computer science, Institute for Research in Fundamental Sciences
- 2020** (Winter) **Computational Social Science Workshop**
by Students' Union of Mathematical Sciences Sharif University
- 2019** (Winter) **8TH IPM-HPC Workshop on Multi-Core Systems & Parallel Platforms**
by High-Performance-Computing, Institute for Research in Fundamental Sciences
- 2018** (Summer) **School on Theory & Applications of Complex Networks**
by Physics Department, Shahid Beheshti University
- 2017** (Fall) **IPM Data Science Day**
by School of Computer Science, Institute for Research in Fundamental Sciences
- 2016** (Winter) **21TH School of Advance Physics Education**
by Institute for Advanced Studies in Basic Sciences

Honors & Awards

- 2017 Top 1% Ranking** – National Entrance Exam for Higher Education (Master's level) – Awarded Full Tuition Scholarship
- 2017 Third Place, Photography** – First Sharif University Art Festival
- 2016 Selected Artist** – Second International Photography Festival at Tehran's Milad Tower
- 2012 Top 1% Ranking** – National Entrance Exam for Higher Education (Bachelor's level) – Awarded Full Tuition Scholarship
- 2010 Third-Ranked Scholarship Recipient** – Allameh Tabatabaei Complex of Culture & Education
- 2009 Second-Ranked Scholarship Recipient** – Allameh Tabatabaei Complex of Culture & Education
- 2007 Distinction** – Eighth Grade Student, Pascal Competition at the University of Waterloo

Publications

- [1] Mohammadi, S., **Moradi, P.**, Trufanov, A. et al. A structural approach to detecting opinion leaders in Twitter by random matrix theory. *Sci Rep* 13, 21788 (2023). <https://doi.org/10.1038/s41598-023-48682-5>
- [2] Farzam, A., **Moradi, P.**, Mohammadi, S. et al. Opinion manipulation on Farsi Twitter. *Sci Rep* 13, 333 (2023). <https://doi.org/10.1038/s41598-022-26921-5>
- [3] Mohammadi S, **Moradi P**, Firouzabadi SM, Jafari G (2022) The footprint of campaign strategies in Farsi Twitter: A case for 2021 Iranian presidential election. *PLOS ONE* 17(7): e0270822. <https://doi.org/10.1371/journal.pone.0270822>