PARHAM MORADI

@ parhammrd@gmail.com   Ⓢ Parham Moradi   📞 +989127195875   🌐 parhammrd.github.io

EDUCATION

M.Sc. in Complex Systems & Non-linear Dynamics
Shahid Beheshti University (SBU), Tehran, Iran

📅 2017 – 2020   Overall GPA: 15.15/20

Thesis title: **Station & Detection of Bots in Social Media**
Supervisor: Prof. Gholamreza Jafari

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B.Sc. in Physics
Sharif University of Technology (SUT), Tehran, Iran

📅 2012 – 2017   Overall GPA: 14.84/20

Thesis title: **Electronic Structure of Carbon Materials**
Supervisor: Prof. Seyed Akbar Jafari

RESEARCH INTERESTS

- Complex Phenomena & Network Approach.
- Data Science, Data Visualization & Gathering Data.
- Social Data and Demography.
- Computational Physics and Agent Model.
- Statistical Physics & Stochastic Processes.

EXPERIENCE

CTO
Zamineh Art Platform

📅 Oct. 2020 – Ongoing   📍 Tehran, Iran

- Tech Director
- Product Lead
- Curating The Art Genome Project (TAGP)

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Data Science Fellow
Center for Complex Networks and Social Data (CCNSD)

📅 Nov. 2019 – Ongoing   📍 SBU, Tehran, Iran

- Research Assistant
- Data Moderator

OUTREACH & VOLUNTEER ACTIVITIES

- **Organizer and Lecturer of Complex Networks: First Step To Social Media Analysis (2022)**
  The Twitter Workshop at CCNSD

- **Organizer and Lecturer of First Twitter Data Mining Workshop (2019)**
  The Twitter Project at CCNSD

- **Photojournalist at First Gathering National Student & Alumni of Handicraft & Folk Art (2016)**
  Alzahra University

PUBLICATIONS

📄 Journal Articles

- Farzam, Amirhossein et al. (2022). "Opinion Manipulation on Farsi Twitter". In: DOI: 10.48550/ARXIV.2205.09296. URL: https://arxiv.org/abs/2205.09296.
- Mohammadi, Saeedeh et al. (July 2022). "The footprint of campaign strategies in Farsi Twitter: A case for 2021 Iranian presidential election". In: *PLOS ONE* 17.7, pp. 1–15. URL: https://doi.org/10.1371/journal.pone.0270822.

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👥 Conference Proceedings

- Farzam, A., P. Moradi, S. Mohammadi, et al. (n.d.). "Farsi Twitter as a public sphere: An event-based analysis." In: Oral Presentation at PCNET20 Conference in Rome Italy.
- Farzam, A., P. Moradi, Z. Padar, et al. (n.d.). "Content VS Structure in Farsi Twitter." In: Oral Presentation at Networks 2021 Conference at Indiana University Network Science Institute.

PRESENTATIONS

- **Urgent Path to Data Gathering**
  Shahid Beheshti University, 2022.
  The lecture on Twitter Workshop, First Step to Social Media Analysis. 🎧
- **Introduction to Twitter Application Programming Interface**
  Shahid Beheshti University, 2020.
  Center for Complex Networks and Social Data.
- **Fake News in Social Media**
  Shahid Beheshti University, 2019.
  The Lecture at First Twitter Data Mining Workshop.

WORKSHOPS & CONFERENCES

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

RESEARCH

Research Assistant in CCNSD

📅 2022 – Ongoing   📍 SUB, Tehran, Iran

Project Title: Natural Language Processing on Political Context and Emotional Classification.

Project leaders: Prof. Gholamreza Jafari

Project Description: Used Deep Learning and NLP on political Context.

Research Assistant in CCNSD

📅 2021 – 2022   📍 SUB, Tehran, Iran

Project Title: Monitoring Twitter Activity on twelve Iran presidential election.

Project leaders: Prof. Gholamreza Jafari

Project Description: Capture social media activity during the presidential election in Iran and prepare Academic Data to initiate research.

Curating TAGP in Zamineh Art Platform

📅 2020 – 2022   📍 Tehran, Iran

Project Title: Accordance The Art Genome Project in Iran Visial Art

Project Description: Supported by Zamineh Content & Editorial and art student interns, matching the primary Iran art scene with the terms of The Art Genome Project.

Data Moderator in CCNSD

📅 2019 – 2020   📍 SUB, Tehran, Iran

Project Title: Implement project at Social Media user classification.

Project leaders: Prof. Gholamreza Jafari

Project Description: Used the Botometer to estimate the distribution of CAP in the Farsi Twitter by crowdsourcing.

SELECTED COURSES

Application of Computer in Physics, Lab	18.5/20
Non-equilibrium Statistical Physics	17/20
Condensed Matter	17/20
Physics of Complex Systems	16/20

COMPUTER SKILLS

- Python
- LaTeX
- Git & Collaborative Development
- Linux
- Cloud Computing
- C & C++
- SQL
- Matlab
- Fortran
- Data Analysis, & Visualization Libraries:

  NumPy, Pandas, SQLAlchemy, nltk, SciPy, TensorFlow, NetworkX, scikit-learn, Matplotlib, Seaborn

TEACHING EXPERIENCES

- Taught **Introduction to Fundamental Physics** (2016)
- Taught **Introduction to Math Calculation** (2015)

ACADEMIC PROJECTS

Final Project in Critical Phenomena Course

📅 Winter 2019   📍 SUB, Tehran, Iran

Project Title: Transformations of Ising Models.

Supervisor: Dr. Seyed Sadegh Movahed

Project Description: Review the transition point with Partition function & Thermodynamic calculations based on the 1959 Michael E. Fisher Article to obtain Magnetic susceptibility.

Final Project in Electrodynamics Course

📅 Winter 2018   📍 SUB, Tehran, Iran

Project Title: Jacobi and Gauss-Siedel to solving Poisson Equation.

Supervisor: Dr. Ali Sadeghi

Project Description: Used the Jacobi and Gauss-Seidel iteration method to solve numerically Poisson Equation in the square lattice by flat density charge.

Final Project in Condensed Matter Course

📅 Spring 2016   📍 SUT, Tehran, Iran

Project Title: Spin-Orbit Coupling in Tetragonal Bismuth Bilayer.

Supervisor: Dr. Seyed Akbar Jafari

Project Description: 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 and the Slater-Koster method.

Project in the Application of Computer in Physics Course

📅 Spring 2015   📍 SUT, Tehran, Iran

Project Title: Monte Carlo Simulation of The Habard & Ising Model on Honeycomb Lattice.

Supervisor: Dr. Seyed Akbar Jafari

Project Description: Used Fortran to do the mentioned simulations and briefly study the phenomena.

Collaborate in a Project

📅 Winter 2015   📍 SUT, Tehran, Iran

Project Title: Apply the Flat Histogram approach to improve the Ising model solution.

Supervisor: Dr. M. R. Ejtehadi

Project Description: Studied the Flat Histogram method to decrease computational cost in solving the Ising model base on the Monte Carlo method. The final result as C++ program ran with cluster calculation.

REFEREES

Prof. Gholamreza Jafari
@ Affiliations: Professor, Department of Physics, Shahid Beheshti University, Tehran, Iran.
✉ g_jafari@sbu.ac.ir

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Dr. Ali Hosseiny Esfidvajani
@ Affiliations: Assistant Professor, Department of Physics, Shahid Beheshti University, Tehran, Iran.
✉ alihd22@gmail.com

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Prof. Syed Akbar Jafari
@ Affiliations: Professor, Department of Physics, Sharif University of Technology, Tehran, Iran.
✉ jafari@physics.sharif.ir

HONORS & AWARDS

- Ranked in the top 1% of Master National Entrance Gratis Tuition for Higher Education Examination (2017)
- Third Place in Photography at The First Sharif University Art Festival (2017)
- Selected Artist at The Second International Photography Tehran Milad Tower Festival (2016)
- Ranked in the top 1% of Bachelor National Entrance Gratis Tuition for Higher Education Examination (2012)
- Third-Ranked Student Funded Scholarship at the Allame Tabatabei Complex of Culture & Education. (2010)
- Second-Ranked Student Funded Scholarship at the Allame Tabatabei Complex of Culture & Education (2009)
- Distinction Eighth Grade Student at Pascal Competition in Waterloo University (2007)