Negin **Zarbakhsh** She/Her

- in linkedin.com/in/Negin Zarbakhsh
- Negeenzarbakhsh@outlook.com
- **Q** Dublin, Ireland

https://www.neginzarbakhsh.com/

Key Attributes:

Human Mobility, Machine Learning (ML), Marketing research, Social Network Analytics (SNA), Spatiotemporal Analysis, Trade Analysis.



FDUCATION

2021- Present

Ph.D, Computer Science, School of Computer Science, UNIVERSITY COLLEGE DUBLIN (UCD), Dublin, Ireland

> Research Area: Spatiotemporal networks analytics of human mobility patterns at points of interest

2015 - 2017

M.Sc., Information Technology (IT) Engineering, School of Industrial Engineering, Tarbiat Modares UNIVERSITY (TMU), Tehran, Iran

- > Thesis Grade (20 scale): 20 Overall GPA: 18.21 (Top 3)
- > Thesis: Network analytics of medical prescriptions using insurance datasets

2010 - 2014

B.Sc., Industrial Engineering, School of Industrial Engineering, UNIVERSITY OF SCIENCE AND CULTURE (USC), Tehran, Iran

- > Major GPA (20 scale): 18.12 Overall GPA: 17.89 (Top 10%)
- > A main members of the scientific student association



TEACHING EXPERIENCE

2021-2022

Graduate Research Demonstrator, UCD UNIVERSITY, Dublin, Ireland

- > Assisted students with Python coding assignments.
- > Graded student Python assignment scripts.
- COMP30760: Data Science in Python (Undergraduate module)
- COMP47670: Data Science in Python (Graduate module)
- COMP10280: Python programming I (Conversion graduate module)
- COMP20270: Python OOP (Conversion graduate module)

2020-2021

Graduate Research Demonstrator, UCD UNIVERSITY, Dublin, Ireland

- > Assisted students with C coding assignments.
- > Graded student C assignment scripts.
- COMP10120: Computer C Programming II (Undergraduate module)

2013 - 2014

Undergraduate Research Demonstrator, UCS UNIVERSITY, Tehran, Iran

- > Assisted with preparing teaching materials.
- Principles of marketing (Undergraduate module)

INDUSTRY EXPERIENCE

2020-2021

Brand Activation Specialist, Marketing Department, NESTLÉ, Tehran, Iran

- > Nescafé budget planning: Estimated the return on investment for marketing campaigns by assessing fixed marketing expenses and total trade spending.
- > Nescafé innovation and renovation projects: localized the products' artworks based on consumer behavior
- > Nescafé sales forecasting: Predicted sales targets for modern trade, general trade, and e-commerce channels using sell-out data from big retailers such as Carrefour, Digikala, etc. Analysed agency data, including sampling and social media, to identify trends and customer behavior in order to identify opportunities and solve problems.
- > Nescafe's marketing campaigns : Translated brand objectives into channel targets in coordination with the sales department, shortlisted activation agencies to be invited for activation pitches, developed locally relevant tactical activation plan in line with regional strategic activation plans, and conceptualized campaign ideas to increase brand engagement.
- > Lead a team of 60 third-party employees for sampling/promotional activities.

2017-2019

Key Account Executive, Modern Trade Channel- Sales Department, NESTLÉ, Tehran, Iran

- > Set volume and value monthly sales targets and achieved them.
- > Foretasted annual sales for Nesquik, Nescafé, Cerelac, and NANKIDs.
- > Lead a merchandiser team of 5 employees and trained them in line with the company's values.

2015 - 2016 Project Coordinator, Engineering, Procurement and Construction (EPC), Shimbar, Tehran, Iran

- > Documented project plans for more than 10 construction companies.
- > Tracked activity progress by Microsoft Project software.



INTERNSHIP PROGRAMS

Summer 2017

Nestlé Sales Academy Trainee, NESTLÉ, Tehran, Iran

> Graduated from Nestlé's Sales academy program, a program that combines classroom training, field visits, assignments, and mentorship to develop skills and competency in sales. As a final project, a marketing strategy for recruiting Iranian youths into the world of coffee is developed.

Spring 2017

QUnilever Leadership Internship Program (ULIP), UNILEVER, Tehran, Iran

> Built communication and leadership skills required for working in FMCG industry. The final project was the implementation of a service catalog based on Information Technology Infrastructure Library (ITIL) specifications for IT department.

SKILLS

Language Persian (Native Proficiency), English: IELTS overall score: 7.0 (L:7.0, R:7.0, W:6.5 and S:7.5)

Database PostgreSQL

Software Gephi, MS Office Suite, ŁTĘX

ML and SNA Supervised Learning, Unsupervised Learning, SNA

Programming Languages

Python

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Python Libraries: Igraph, NetworkX, Matplotlib, Pandas, Scikit-Learn, Numpy

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HONORS AND AWARDS

- 2021 Winner of SafeGraph Holiday Datathon.
- 2021 Recipient of the UCD school of computer science Ph.D. scholarship.
- 2018 The employee of the year, sales department, Nestlé.
- 2017 Top 3 GPA among all M.Sc. students of IT at TMU.
- 2014 Top 10% GPA among all B.Sc. students of IE at USC.



PUBLICATIONS

Working Papers:

Zarbakhsh, N., Misaghian, S. & McArdle, G. (2022) 'Human mobility in load forecasting during COVID-19 pandemic in Ireland", "IEEE Open Access Journal of Power and Energy (OAJPE) Special Section on COVID-19 Impact on Electrical Grid Operation: Analysis and Mitigation" (Under reversion).

Zarbakhsh, N., Albadavi, A., Sharif, F. & Shojaei, N. "A Novel application of bipartite network for knowledge sharing among specialized physicians by using medical prescription".



PROJECTS

SAFEGRAPH HOLIDAY DATATHON, SAFEGRAPH

2020-2021

Spatiotemporal analysis of Open Census and SafeGraph Patterns datasets to determine human mobility patterns during Black Friday at large retailers in the United States.

SpatioTemporal Analysis Python

Analyzing a corpus of news stories, a text-mining techniques, UCD

2020 - 2021

github.com/NeginZarbakhsh/Text-News-Scraping-Classification-Topic-modeling

Multi-class text classification machine learning model for predicting news article categories.

Python Machine Learning

NESCAFE BACK TO UNIVERSITY MARKETING CAMPAIGN (TEAM PROJECT), NESTLÉ

2019

✓ NESCAFE Campaign

A 360-degree marketing campaign utilizing social media platforms with the theme "Back to University" was developed in response to COVID-19 pandemic.

Social Media Analytics Instagram

A NOVEL APPLICATION OF BIPARTITE NETWORK FOR KNOWLEDGE SHARING AMONG SPECIALIZED PHYSICIANS BY USING MEDICAL PRESCRIPTION, NON-COMMUNICABLE DISEASES RESEARCH CENTER 2016 -2017



Analyzing polypharmacy in Iranian healthcare systems by visualizing prescription networks.

Python R Gephi PostgreSQL



Additional Relevant Certifications

- 2021 Analysing Covid-19 Geospatial data with Python, Coursera.
- 2020 Complete Python Developer in 2020: Zero to Mastery, Udemy.
- 2020 Complete 2020 Data Science & Machine Learning Bootcamp, Udemy.
- 2016 Intro to Python for Data Science, DataCamp.
- 2016 Graph Analytics for Big Data, Coursera.
- 2016 Fundamental Writing Course for ISI Papers, TMU.
- Project Management Body of Knowledge 2012, Ministry of Science, Research&Technology-Tosea Institute. 2016
- 2013 Quality Management System Introduction ISO 9001: 2008, Moody International Certification.
- 2013 European Foundation for Quality Management, Moody International Certification.

66 References

Available upon request

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