Esin Karahan

Contact: esin.karahan@gmail.com https://www.linkedin.com/in/esin-karahan
Phone: 0 7879 628 795, Cardiff, UK https://github.com/esinkarahan

Personal Statement

Data scientist specialized in statistical data analysis and well-versed in computational modeling, machine learning and time series analysis with extensive experience in applied academia in neuroimaging and neuroscience. Worked in international teams for 6 years and developed good collaboration skills in teams composed of technical/non-technical participants.

Key Skills

- Data Science Stack: scikit learn, numpy, pandas, seaborn, networkx, matplotlib
- Machine learning
- Statistical data analysis & Signal processing
- Time series analysis, Regularization Techniques
- Familiar with Neural networks and Deep learning
- Data visualization and Technical writing
- Programming experience: Python (Intermediate), C (Intermediate), Matlab (Advanced), R (Basic), Bash (Basic), SQL (Basic)
- Git version control
- Scrum agile methods
- Project management
- Operations research (discrete event simulation)

Work Experience

Data Science Fellow, *Science to Data Science Program (s2ds, Pivigo Ltd), UK* ***March 2021 - April 2021***

Worked in a team of five to develop data science solutions in collaboration with industry partner Podium Network:

- Developed a model to simulate daily evolution of user growth and revenue for an app based on performance metrics.
- Created a program from scratch that simulates data flow across a decentralized network for new social media app that preserves anonymity and create visualization tools inspired from Discrete Event Simulation from operations research.

Research Associate, *Cardiff University Brain Imaging Centre, Cardiff, UK* ***2017 - Present***

- By using statistical data analysis and imaging processing techniques, extracted individual differences in brain structure of people.
- Created fully automatic image processing pipeline to analyze 200 subjects on HPC clusters that speeds up the analysis 10 times than running on a local computer. Achieved skeletonization of 3D brain images.

Postdoctoral Research Fellow, *Neuroinformatics Collaboratory, UESTC, Chengdu, China* ***2015 - 2017***

- Implemented regularization methods (Lasso, Smooth Lasso, Non-negativity constraints) for tensor decompositions and applied on discovering connections in the brain for the first time.
- Prepared 2 grant applications, led educational lectures on neuroimaging and mathematical modeling, supervised graduate students.

Visiting Researcher, *Cuban Neuroscience Center, Havana, Cuba* ***2013***

- Developed and applied regularized and high dimensional Granger causality analysis on metabolic time signals from brain

Research Assistant, *Bogazici University, Biomedical Engineering Institute, Istanbul, Turkey* ***2008 - 2015***

- Developed novel method for integration of datasets on hidden subspace that contributed to fellowship for international visit and long-term collaboration with 4 papers, 6 conference proceedings and 2 workshops.
- Applied machine learning methods for decoding brain signals

Education

- Ph.D.: Biomedical Engineering, Bogazici University, Istanbul, Turkey (2015)
- M.Sc.: Biomedical Engineering, Bogazici University, Istanbul, Turkey (2007)
- B.Sc.: Electrical & Electronics Engineering, Bogazici University, Istanbul, Turkey (2005)

Achievements

- Endorsed by Royal Society for Exceptional Promise for Global Talent Visa
- Co-Principal Investigator on Welcome Trust supported ISSF Grant (2021)
- Co-authored 7 scientific papers in peer-reviewed journals and 22 international conference proceedings.
- Received fellowship from Scientific and Technological Research Council of Turkey for 3 months scientific visit.
- Organizational committee member of 5 conferences, speaker at Soapbox Science Cardiff.
- Recipient of TEKFEN scholarship for engineering undergraduate students, 2000-2005.
- Ranked 68th among 1.5 million candidates in the university entrance exam of Turkey.

Certificates

- Science to Data Science Virtual (s2ds) 2021 ***April 2021***
- Deep Learning for Healthcare Image Analysis, NVIDIA Deep Learning Institute ***May 2021***
- Fundamentals of Deep Learning, NVIDIA Deep Learning Institute ***Dec 2020***
- Fundamentals of Accelerated Computing with CUDA Python, NVIDIA Deep Learning Institute ***Feb 2021***
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Coursera ***Feb 2021***
- Neural Networks and Deep Learning, Coursera ***Feb 2020***
- Build Basic Generative Adversarial Networks (GANS), Coursera ***Aug 2021***

Languages

English (fluent), Turkish (native), Spanish (Beginner)

Personal Interests

Hiking, yoga, literature, inventing new recipes.