

SULEYMAN ONUR DOGAN

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EXPERIENCE

Research Assistant

March 2022-Present

Computational Biology Group, Antalya Bilim University

Tubitak Project – “Neuroimmune guidance cues, MicroRNAs & Inflammatory responses: Sex differences in CardioVascular Diseases” under supervision of Dr. Hilal Kazan

- Focused on the differential gene co-expression network with pairwise and cluster-wise analysis, via clustering algorithms.
- Data science techniques with R applied for analysis of gene expression datasets.

Research Intern

July 2022-September 2022

Tastan Lab, Sabanci University

- Developed an open source project for detection of possible sumoylation sites that emerges through mutations in different cancers and worked on optimization, via encoders, of pre-developed deep sequential learning architectural model which is used in the project. (github.com/sonurdogan/tlmsa)
- Data manipulation techniques with pandas applied for mapping mutation on healthy sequence and analysis of results.

Research Assistant

Sept 2020-July 2022

Statistical Signal Processing Lab, Antalya Bilim University

Tubitak Project - “Investigation of the interactions between the neuronal noise and the neuronal network using information-theoretical approaches” under supervision of Dr. Deniz Gencaga and Dr. Sevgi Sengul Ayan.

- Taken parts on the application of information theory to neuroscience, both theoretical and coding work.
- Conditional information flow relationships on neuronal network investigated with Transfer Entropy.
- Practiced the implementation of efficient packages such as IDTxl to process neuronal data via coding of information-theoretical methods.
- Examined Pyspark, Microsoft Spark cluster for big data processing, SLURM on HPC and VM on Google Cloud.

SKILLS

- *Programming Languages:* Python, R, Java, C, Matlab, SQL, Unix, Bash Scripting
- *Frameworks/Tools:* Scikit-Learn, Tensorflow, Keras, Pandas, IDTxl, PySpark, PysparkML

EDUCATION

Bachelor Of Science, Computer Engineering

2019-Present

Antalya Bilim University

GPA: 3.68 %100 English

EXTERNAL PROJECTS

SLAM Simulation of Indoor robot

SPRING 2021

- Simulations have done with a BreezySLAM algorithm by using some existing real Odometry and Lidar Data for SLAM indoor robot. Throughout the project, slam algorithms were the main emphasis.

Studied some significant topics:

Hardware and software units of autonomous robots, kinematics, Robotic Operating System, Kalman Filter, Particle Filter, SLAM algorithms.

Application of Matrix Factorization for Movie Recommendation System with Parallel Computing

FALL 2021

- Focused on application of Matrix Factorization technique with ALS optimization algorithm which is developed, used in the Netflix competition on the Collaborative Filtering-based recommendation system and coding of the model to the movieLens data by using PySparkML.

Application of Machine Learning Techniques on Biomedical Images

FALL 2022

- The classification of cancer tumors using biomedical images, such as a brain tumor image that is tracked by utilizing MRI, is developing as part of Biomedical Images course of Prof. Umit Demirbas.

CONFERENCE PRESENTATIONS

- Yacine Marouf, **Onur Dogan**, Ernest Diez Benavente, Gerard Pasterkamp, Hester M. den Ruijter, Janine van Gils, Katey Rayner, Hilal Kazan. Sex-biased Expression of Neuroimmune Guidance Cues in Cardiovascular Diseases. (20/10/2022-22/10/2022) (**HIBIT'22**) (Abstract Presented)

- Yacine Marouf, **Onur Dogan**, Ernest Diez Benavente, Gerard Pasterkamp, Hester M. den Ruijter, Janine van Gils, Katey Rayner, Hilal Kazan. Sex-biased Expression of Neuroimmune Guidance Cues in Cardiovascular Diseases. (19/09/2022-20/09/2022) (**ERA-CVD'22, Riga, Latvia**) (Poster Presented)

- **O.Dogan**, S.Ş. Ayan, D.Gencaga. Analysis of Neuronal Interaction Using Information-Theoretical Models. The 8th International Congress on Fundamental and Applied Science (19/10/2021-21/10/2021) (**ICFAS'21**) (Abstract Presented)

VOLUNTEER EXPERIENCE

Co-Organizer

Sept 2020-Nov 2021

Google Developers Group, Antalya, Turkey

Aim is to gather people interested in technology, to exchange ideas with them, to organize activities and to follow the technological agenda. • Designed and leaded developers.june robotics event where we hosted five experts in different fields of robotics.

CERTIFICATES

- Machine Learning- **Stanford University Online**
- Intermediate Machine Learning- **Kaggle**
- Introduction to Deep Learning and Machine Learning, Data Visualization - **Global AI Hub**
- Spark Fundamentals – **IBM**
- Data Analysis Using Pyspark- **Coursera Project Network**