İREM BEGÜM GÜNDÜZ

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Education

2021-Present	***Saarland University, Faculty of Mathematics and Informatics*** Doctor of Philosophy – PhD, Computer Science *Academic Supervisor:* Prof. Dr. Fabian MULLER
2017-2021	***Marmara University, Faculty of Engineering*** Bachelor of Engineering, - BEng, Bioengineering (English) ***Bachelor Thesis :*** "Discovery of New Drugs for the Inhibition of Type IV Pili Mechanisms in *N. Meningitidis* Computationally" *Academic Supervisor:* Assoc. Prof. Dr. Pemra ÖZBEK SARICA *Scholarship*: TUBITAK 1001 Scholarship

Work & Research Experience

January - Present	***Student Assistant*** Saarland University, Saarland Informatics Campus Integrative Cellular Biology and Bioinformatics *Supervisor :* Prof. Dr. Fabian MULLER
July 2021 - March 2022	***Bioinformatics Intern*** Max Delbrück Center for Molecular Medicine, Berlin Institute of Medical System Biology (BIMSB), Bioinformatics and Omics Data Science Group *Supervisor :* Dr. Altuna AKALİN
April - October 2021	***Project Participant*** Bioinformatics Research Network *Supervisor :* Dr. Alexander J.R. BISHOP
October 2020 - August 2021	***TUBITAK 1001 Project Researcher*** Marmara University, Department of Bioengineering *Supervisors:* Prof. Dr. Berna SARIYAR AKBULUT, Assoc. Prof. Dr. Pemra ÖZBEK SARICA
August - October 2020	***Summer Intern*** VEM Pharmaceuticals
June – August 2019	***Neuroscience Intern*** Istanbul University Aziz Sancar Institute of Experimental Medicine Department of Neuroscience *Supervisor :* Assoc. Prof. Dr. Nurcan ORHAN

2019 – 2021	**Student Assistant**
	Marmara University, Department of Bioengineering, Computational Biology and Bioinformatics Laboratory
	Supervisor : Assoc. Prof. Dr. Pemra ÖZBEK SARICA

Voluntary Activities

2021 - Present	**Member**
	Bioinformatics Research Network

2018 – 2021	**Organization Team Member**
	IEEE Marmara University Engineering in Medicine And Biology (IEEE EMBS)

2017 – 2020	**Article Writer**
	Marmara University Faculty of Engineering Journal (MUFEM)

2017 – 2020	**Head of the Journal and Promotions Team**
	Marmara University Bioengineering Society (BIYOM)

Courses & Certificates

- Data Science R Basics
- Introduction to Tidyverse
- Intermediate R Programming
- Machine Learning with Caret
- Python for Genomics
- Python Data Structures
- Introduction to Statistics with R
- Unsupervised Learning
- Linux Command Line: Shell Scripting

Projects

- Discovery of New Drugs for the Inhibition of Type IV Pili Mechanisms in *N. Meningitidis*
Supervisors: Prof. Dr. Berna SARIYAR AKBULUT , Assoc. Prof. Dr. Pemra ÖZBEK SARICA

- R-loops Levels and Clinical Associations for Ewing Sarcoma
(Ongoing)
Supervisors: Assoc. Prof. Dr. Alexander J.R. BISHOP, Dr. Daniel MONTEMAYOR

- The potential of Multi-Omics and the Limitations of Panel Sequencing for Clinical Variable Prediction in Cancer
(Manuscript in preparation)
Supervisors: Dr. Altuna AKALİN

- deconvR: Simulation and Deconvolution of Omic Profiles
(R Package is available in the Bioconductor Platform)
Supervisor: Dr. Altuna AKALİN

Skills & Interests

- Programming mainly with R, Python, and also with other languages such as Java, C, MATLAB.
- Computer - aided drug discovery
- Genomic data mining and analysis
- Machine learning algorithms
- R package development
- Development of computational methods for analyzing genomic data

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