

# SEYHMUS GULER

☎ 617-504-7329 | ✉ seyhmusguler@gmail.com | 🌐 seyhmusguler.com

## SUMMARY

Senior Data Scientist with 10+ years experience in applying advanced statistical and machine learning models to large-scale datasets; expert in developing neuroimaging technologies, optimizing non-invasive brain stimulation, and building large-scale multi-omics datasets for early drug discovery. Collaborative leader with expertise in multiple programming languages, teaching, and mentoring. Detail-oriented problem solver recognized for delivering innovative, data-driven solutions in cross-functional environments. Experience modernizing data infrastructures, shipping new data products, and decommissioning older systems that touch multiple upstream and downstream processes.

## EXPERIENCE

<b>Senior data scientist</b>	June 2024 – Present
<b>Data scientist</b>	March 2022 – May 2024
<i>Recursion Pharmaceuticals</i>	<i>Salt Lake City, UT</i>
<ul style="list-style-type: none"><li>Develop computational tools to create maps of biology from phenomic and transcriptomic data. Apply statistical methods to make inferences on multi-omics data.</li></ul>	
<b>Research fellow, Department of Psychiatry</b>	March 2020 – Feb 2022
<i>Massachusetts General Hospital and Harvard Medical School</i>	<i>Boston, MA</i>
<ul style="list-style-type: none"><li>Led project that investigates the effect of coupled non-invasive brain stimulation and acupuncture on chronic low-back pain. Acquired, cleaned, and analyzed functional MRI (fMRI) data using in-house pipelines.</li></ul>	
<b>Research fellow, Department of Radiology</b>	Nov. 2016 – Feb. 2020
<i>Boston Children's Hospital and Harvard Medical School</i>	<i>Boston, MA</i>
<ul style="list-style-type: none"><li>Developed motion correction and missing-data completion strategies for fMRI and tensor data. Designed and implemented fMRI-neurofeedback protocols to train and improve brain function via feedback.</li></ul>	
<b>Lecturer (part-time), Department of Electrical and Computer Engineering</b>	June 2016 – Aug. 2019
<i>Northeastern University</i>	<i>Boston, MA</i>
<ul style="list-style-type: none"><li>Taught Noise and Stochastic Processes (EECE3468) three semesters; and Introduction to Linear Algebra and Probability for Data Science (DS5020) one semester. Evaluations available upon request.</li></ul>	
<b>Research assistant, Department of Electrical and Computer Engineering</b>	Sep. 2011 – Oct. 2016
<i>Northeastern University</i>	<i>Boston, MA</i>
<ul style="list-style-type: none"><li>Formulated and solved various optimization methods for effective current delivery in transcranial direct current stimulation (tDCS) and electrocorticography (ECoG) stimulation.</li></ul>	

## SOFTWARE SKILLS

**Programming languages:** python, bash, SQL, R, Dockerfile  
**Python libraries:** pandas/polars, numpy, scipy, sklearn, pytorch, pandera, pydantic, plotly, seaborn, matplotlib, requests, django, pytest  
**Production code/Version control/publication tools:** CI/CD pipelines, testing suite, gcloud suite, git, github, Virtual environments and docker containers, LaTeX, Office, Mendeley  
**Neuroimaging data analysis:** FSL, Nipype, Freesurfer, fMRIPrep, SPM, CONN, BIDS, ANTs, Nilearn, GIFT  
**Hands-on experience :** Linux workstations, HPC, Operating an MRI scanner, tDCS setup and application, EEG data acquisition and analysis

## EDUCATION

<b>Ph.D.</b> in Electrical Engineering	Sep 2011 – Oct 2016
<i>Northeastern University</i>	<i>Boston, MA</i>
Thesis title: <i>Brain Stimulus Pattern Optimization Using Scalp and Cortical Electrode Arrays</i> . Advisor: <i>Dana H. Brooks</i> .	
<b>B.Sc.</b> in Electrical and Electronics Engineering	Sep 2006 – Jun 2011
<i>Bilkent University</i>	<i>Ankara, Turkey</i>

## AWARDS AND HONORS

Graduate research assistantship (GRA), Northeastern University, Boston, MA (2011-2016)  
Full scholarship for undergraduate studies, Bilkent University, Ankara, Turkey (2006-2011)  
Ranked 210<sup>th</sup> in 2006 National University Entrance Exam, Turkey (~ 1.5 million students)  
Ranked 5<sup>th</sup> (Silver medalist) in 13<sup>th</sup> National Mathematics Olympiad, TUBITAK, Ankara, Turkey (~10k students)

## PUBLICATIONS

📖 – 7 journal papers (3 first-authored, h-index=7), 3 conference papers, and 6 conference abstracts, all peer-reviewed.

## LANGUAGES AND INTERESTS

Languages: Kurdish (Native), Turkish (Native), English (Fluent), Spanish (Beginner)  
Interests: Dancing, Racquetball, Snowboarding, Canyoneering, Jump rope, Hiking, MTB, Soccer, Chess