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Mehmet Ozan Baykan

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EDUCATION

B.Sc. in Mathematics

September 2019 - June 2024 (expected)

Ankara

 $Ankara,\ Turkey$

Bilkent University
Grade: 3.06/4.00

B.Sc. in Mathematics

 $Heidelberg\ University,\ ERASMUS+\ Exchange\ Semester$

April 2023 - September 2023 Heidelberg, Germany

September 2013 - June 2018

Kocaeli, Turkey

High School

TEV Inanc Turkes High School

Independent private co-educational boarding school for the gifted and talented in Turkey Bilingual IB Diploma in English & Turkish

Relevant Coursework

IE448 - Financial Issues in Engineering Projects, Dr. Semih Ergür Bilkent University EEE485 - Statistical Learning and Data Analytics, Prof. Cem Tekin Bilkent University EEE443 - Neural Networks, Prof. Ömer Morgül Bilkent University IE440 - Introduction to Financial Engineering, Prof. Cağın Ararat Bilkent University IE421 - Introduction to Stochastic Processes, Prof. Cağın Ararat Bilkent University Corporate Finance, Dr. Pascal Kieren Heidelberg University Machine Learning Essentials, Prof. Ulrich Köthe Heidelberg University Computational Statistics and Data Analysis, Prof. Daniel Durstewitz Heidelberg University

WORK EXPERIENCE

Undergraduate Research Assistant

 $MIDST\ Lab\ @\ Sabanci\ University$

July 2022 - March 2023

İstanbul, Turkey

- Investigated the biophysical mechanisms underlying TMP resistance among E. Coli DHFR mutants by physics-informed analysis of Molecular Dynamics (MD) simulation data.
- Tools: Python, ProDy, VMD

Undergraduate Researcher / iGEM Team Member

Synthetic Biosystems Laboratory @ Bilkent University UNAM

April 2021 - September 2022

Ankara, Turkey

- Collaborated with a multidisciplinary team of bachelor students in an independent research project in the rapeutic applications of bacterial neurotoxins for the prestigious i GEM Competition (https://competition.igem.org/)
- Responsible for mathematical and computational modeling and conducting wet-lab experiments.

Tutor for CS115 - Introduction to Programming in Python $Bilkent\ University$

January 2021 - June 2021

Ankara, Turkey

- Organized and helped students in weekly online coding sessions in coordination with professors and teaching assistants

Supply Chain Intern

July 2017

Sealed Air

Istanbul, Turkey

- Shadowed employees in different ranks during daily tasks and meetings as a high-school student interested in operations management

PROJECTS

Senior Project on Wigner's Semicircle Law

September - December 2023

Bachelor's Thesis

- Explored literature on measure-theoretic foundations of probability theory and random matrix theory.
- Research culminated in a self-contained, mathematically rigorous proof of limiting spectral distribution of Wigner matrices.
- Advised by Professor Aurelian Gheondea

EXTRACURRICULAR ACTIVITIES

 $Bilkent\ Synthetic\ Biology\ Society$

President September 2021 - June 2022

Ankara, Turkey

Member September 2020 - Present

Bilkent Music Society

Ankara, Turkey

Bassoon Performance Student September 2013 - June 2018

Guher & Suher Pekinel Department of Music Kocaeli, Turkey

VOLUNTARY WORK

Instructor April 2022

Introductory Camp in Biotechnology for Middle Schoolers

Ankara, Turkey

nstructor September 2016 - June 2018

Muallimkoy Education Project Kocaeli, Turkey

SKILLS

Language Turkish (native), English (TOEFL 112/120), German (A2)

Programming Python, Matlab, SQL, Power BI, Tableau

Technical Skills Mathematical and Statistical Modeling, Data Analysis, Machine Learning (TensorFlow, PyTorch)

Other LATEX, MS Excel, MS Powerpoint