# Furkan Eşref Yazıcı

# Personal Profile

As an interdisciplinary researcher, my focus lies in the field of data science and deep learning. I have extensive experience conducting research across various domains and topics. Additionally, I have served as an event organizer, demonstrating my leadership and teamwork capabilities, along with strong social skills.

# Education

2018 - Middle East Technical University (METU), Physics,

Present Bachelor of Science,

Ankara, Turkey.

2014-2018 ENKA Technical High School, Industrial Automation,

Kocaeli, Turkey.

# Research Experience

Nov 2021 - Undergraduate Research Assistant, Simply Complex Lab,

Present The laboratory's research area centers on intricate, far-from-equilibrium phenomena. As an integral component of broader collaborative investigations, I contributed to the cross-correlation analysis of hyperuniformity dynamics within a colloidal system, employing principles from the domain of fluid dynamics. Presently, my research entails an examination of causal network analysis concerning the emergence of hyperuniformity within this system. I am actively engaged in the development of Python code to assess causality resulting from interparticle collisions. Supervisor: Dr. Serim İlday.

Feb 2020 - Undergraduate Research Assistant, IVMER The Research and Application,

Jun 2022 Contributed to Quantum Convolutional Neural Networks (QCNN) for image detection utilizing various quantum gate algorithms. Also, applied Quantum Machine Learning techniques to address the 'Travelling Salesman' problem within a research team. Supervisor: Prof. M. Bilge Demirköz.

# Jobs & Internships Experiences

Sep 2021 - **QTurkey**, Staff,

Jan 2023 Outreach Coordinator,

- The aim of the QTurkey (Quantum Turkey) community is to spread quantum technologies and raise awareness through events held in Turkey.
- As the Outreach Team, our aim is to ensure the growth of the QTurkey community, establish domestic and international collaborations, and to keep the QTurkey family active by organizing new events. .

Jul 2021 - **QWorld**, *Internship*.

Aug 2021 **Description:** The project is included the website and classification of all courses and related stuffs. The website is: qmap.qworld.net.

Summer 2017 ALTINAY Technology Group, Internship,

Industrial Automation Technician, Tuzla, Istanbul.

Summer 2016 KANCA, Internship,

Electrical Maintenance Technician,

Tuzla, Istanbul.

# **Prominent Courses**

#### IBM Data Science Professional Certificate,

I completed the IBM Data Science Professional Certificate, a rigorous program covering data science fundamentals, machine learning, and practical project work. This certificate demonstrates my proficiency in data analysis, Python programming, and the use of industry-standard tools and libraries. It showcases my readiness for data science roles and highlights my commitment to ongoing skill development..

# Google Data Analytics Professional Certificate,

I acquired key skills in data cleaning, analysis, and visualization using spreadsheets, SQL, R programming, and Tableau. I learned to organize and analyze data, create visualizations, and present findings effectively. Developed expertise in spreadsheet usage, data ethics, problem-solving, and decision-making. Proficient in SQL querying, Tableau software, R programming, and creating job portfolios with case studies..

### CENG 501: Deep Learning,

A graduate-level course covering representation learning, CNNs, RNNs, autoencoders, and applications to pattern recognition, speech recognition, and natural language processing. Topics include deep hierarchies and learning mechanisms in humans, artificial neural networks, representation in terms of basis functions, independent component analysis, sparse representations, convolutional neural networks, restricted Boltzmann machines, and deep belief networks..

## PHYS 444: Computational Physics II,

On Numeric Methods and their usage in Physics Monte Carlo Method.

### Skills

Languages Turkish (Native), English (Advanced, C1), German (Elementary, A2)

Programming Python, MATLAB, R, Rust

Languages

Database MySQL, SQL

Languages

Knowledge Data Science, Web Scrapping, ETL, Data Analysis, Machine Learning, Quantum Computing

Dashboards Tableau, Dash, Power BI

**Databases** BigQuery

Frameworks PyTorch, Qiskit, Pennylane, Scrapy, Spacy

Web Design HTML, CSS, JavaScript

Design Solidworks, GIMP, Canva, StableDiffusion, Adobe Firefly

#### Service and outreach

September QTurkey, Quantum Event Series (Hackathon, Seminars, and Education), Event Organizer 2022

April 2022 TÜBİTAK & QTurkey, 14 April World Quantum Day, Event Organizer

Sep 2021 - **METU**, Laboratory Assistant, **Description:** Computational Lab Assistant in Dr. Barış Malcıoğlu's

Feb 2022 course of "PHYS 437: Practical Quantum Computing for Scientist"

Feb 2021 QSB Quantum Computing Bronze Workshop, Mentor and Instructor.

# Additional Courses

Online Web3 and NEAR Pathway by Patika.dev (April 2022), Deep Learning by Neuromatch (August 2021), Computational Neuroscience by Neuromatch (July 2021), Qiskit Summer School Quantum Machine Learning by IBM (July 2021), Introduction to Quantum Computing Course by IBM (May 2021)

# Other Interests

Photo-art, Reading/Writing Poems, Reading Books, Sketching, Riding a Bike, Doing Martial Arts.