Dogan Parlak

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Education

University of Zurich, *Zurich, Switzerland*
M.Sc. in Computer Science   *Sep. 2020 – Oct. 2023*
Major: Data Science
Minor: Banking and Finance
GPA: 5.2/6.0
Major GPA: 5.4/6.0

Bilkent University, *Ankara, Turkey*
B.Sc. in Electrical and Electronics Engineering   *Sep. 2016 – Jun. 2020*
GPA: 3.03/4.0

TED Ankara College, *Ankara, Turkey*
High-School   *Sep. 2012 – Jun. 2016*

Research Experience

ETH Zurich - Social Networks Lab, *Zurich, Switzerland*
Research Assistant   *Jun. 2022 – Jul. 2023*
Supervisor: Prof. Dr. Ulrik Brandes

- Employed spatio-temporal tracking data obtained from UEFA to generate automatic formation detection and role assignment algorithms.
- Used the same dataset to cluster passing patterns of players and teams by building spatial networks.

Teaching Experience

ETH Zurich - Soccer Analytics, *Zurich, Switzerland*
Teaching Assistant   *Spring 2023*
Lecturer: *Prof. Dr. Ulrik Brandes*

Industry Experience

Abdi Business Technologies, *Istanbul, Turkey*
Artificial Intelligence Engineer   *May. 2024 – Ongoing.*

Union of European Football Association (UEFA), *Remote*
Data Science Intern   *Oct. 2023 – Jan. 2024*

- **Intelligence Center:** Led online data integration for strategic football research, analyzing player workload with statistical and machine learning tools.
- **Football Team:** Implemented metrics using UEFA tracking and event data, covering ball location and dynamics, press, progression, and pass classifications.

Kardinero Medical Systems, *Ankara, Turkey*
Embedded Systems Intern   *Jun. 2019 – Jul. 2019*

FNSS Defence Systems, *Ankara, Turkey*
Embedded Systems Intern   *Jun. 2018 – Jul. 2018*

Publications

How to Read a Team's Spatial Expressions
*U. Brandes, H. Sotudeh, **D. Parlak**, P. Laffranchi, Mert Erkul*
Under submission, ACM KDD 2024

Significant Projects

An Open-Source Implementation of FIFA's Enhanced Football Intelligence, *University of Zurich, ETH Zurich*
Master's Thesis   2023
Supervisor: Prof. Dr. Claudio J. Tessone, Co-Supervisor: Prof. Dr. Ulrik Brandes

- Were the concepts in the Enhanced Football Intelligence document sufficiently detailed to allow for reproduction of FIFA World Cup 2022 match reports?

UniFi: A Unified Framework for Portfolio Management, *University of Zurich*

Master's Research Project — 2022

Supervisor: Prof. Dr. Manuel Günther

- Developed a framework to compare portfolio allocation methods, enabling users to import data, apply feature engineering, choose between traditional or reinforcement learning models, and back-test methodologies using preferred metrics.

BeeSMART, *Bilkent University*

Bachelors Graduation Project — 2020

Supervisor: Prof. Dr. Ezhan Karasan

- Created a smart hive monitoring project featuring GSM, GPS, and various sensors, using Edge Learning to predict hive conditions from bee sounds and enabling IoT communication over MQTT for real-time data access on Android and Web platforms.

Skills

Software: Python, SQL, R, MATLAB, C, C++, Java, VHDL
Technologies: NumPy, Pandas, Scikit-Learn, PyTorch, TensorFlow, Keras, SoccerAction, Mplsoccer
Tools: Dataiku, VS Code, Jupyter Notebook, Google Colab, Git, XCode, Arduino

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Languages

English	*Level: Advanced*
German	*Level: A2*
Turkish	*Level: Native*

Examinations

TOEFL iBT	*Grade: 97/120*
GRE General Test	*Quantitative: Grade 168/170*

Extracurricular

- Certificate of Completion - Churchill House School of English Language Summer School
- Certificate of Completion - Loyola Marymount University English Language Summer School
- Former Licensed Kickboxer
- Former Licensed Chess Player