Berk Atıl

Ph.D. Student in Computer Science and Engineering

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Education

08/2022– **Ph.D.**, *Computer Science and Engineering*, Pennsylvania State University, State College, PA.

09/2016–02/2022 **B.Sc.**, *Computer Engineering*, Bogazici University, Istanbul, Turkey.
CGPA: 3.61/4.0

02/2020–08/2020 **Erasmus Programme**, *Technical Computer Science*, University of Twente, Enschede, The Netherlands.

Experience

08/2022– **Teaching Assistant in Introduction to Artificial Intelligence**, *Pennsylvania State University*, State College.

02/2022–06/2022 **Software Engineer**, *TAZI AI Systems*, Istanbul.

10/2021–02/2022 **Undergraduate Teaching Assistant in Data Structures and Algorithms**, *Bogazici University*, Istanbul.
Design, grade projects of the students and help them learn course material. More specifically, designing a discrete event simulation project

09/2021–01/2022 **Data Science Intern**, *Roche Turkey*, Istanbul.
- Hands on experience with Machine Learning libraries such as XGBoost on a regression task that also requires probability prediction
- Contributing to the internal Python package for the Natural Language Processing (NLP) tasks

08/2020–01/2022 **Undergraduate Research Assistant**, *Bogazici University*, Istanbul.
- Working on predicting ligand-target binding affinities via deep learning methods
- Working on improving the representations of biomolecules via different kinds of structures such as tree based neural network architectures.
- Working on reducing the adverse effects of biases in the datasets on deep affinity prediction models
- We propose a model-oriented debiasing approach to boost the performance of the drug-target affinity models on novel biomolecules

10/2020–02/2021 **Undergraduate Teaching Assistant in Data Structures and Algorithms**, *Bogazici University*, Istanbul.
Design, grade projects of the students and help them learn course material. More specifically, designing a discrete event simulation project and a project requiring a graph modeling and a graph algorithm development

03/2020–02/2021 **Undergraduate Research Assistant**, *University of Twente*, Enschede.
- Working on predicting the probability of web pages using machine learning algorithms with network structures of the web and the content information of web pages
- We provide three statistical models for the link change rate, the presence of new links and the number of new links for the focused web crawlers. Additionally, we propose ranking methods as guidelines for the focused crawlers to increase their efficiency

02/2019–01/2020 **Backend Development Intern**, *Armut Teknoloji A.Ş.*, Istanbul.
- Hands on experience with Amazon Lambda Functions, Kinesis, Docker and Elastic Search
- Design, develop, troubleshoot, debug, test, ensure browser compatibility and implement API code by using Microsoft SQL Server, Micorosft .Net Core and C#

Languages

Turkish Native
English Fluent

Skills

Languages Python, Java, C++, C, C#, SQL
Other Docker, Git, Latex, .Net Core, PyTorch

Publications

T. K. N. Dang, D. Bucur, **B. Atil**, G. Pitel, F. Ruis, H. Kadkhodaei, N. Litvak. Look back, look around: a systematic analysis of effective predictors for new outlinks in focused Web crawling, *Under Revision, 2021* *ArXiv*

R. Özçelik, A. Bağ, **B. Atıl**, A. Özgür, E. Özkırımlı. Debiaseddta: Model debiasing to boost drug-target affinity prediction, *Under Revision, 2021* *ArXiv*

Abstract Presentations

04/2021 **Machine Learning for Drug Discovery (MLDD) Workshop**, *International Conference on Learning Representations (ICLR)*, (Virtual).
DebiasedDTA: Model Debiasing to Boost Drug - Target Affinity Prediction

10/2021 **Conference on Complex Systems (CCS)**, *Complex System Society*, Lyon, France.
Prediction of New Outlinks on the World Wide Web

09/2021 **The International Symposium on Health Informatics and Bioinformatics (HIBIT)**, *Bilkent University*, Ankara, Turkey (Virtual).
DebiasedDTA: Model Debiasing to Boost Drug - Target Affinity Prediction

07/2021 **Intelligent Systems for Molecular Biology and European Conference on Computational Biology (ISMB/ECCB)**, *International Society For Computational Biology (ISBC)*, (Virtual).
Ensemble learning for novel drug - target affinity prediction

06/2021 **Statistical Inference for Network Models (SINM) Symposium**, *Indiana University Network Science Institute*, Bloomington, The USA (Virtual).
Prediction of new outlinks in the World Wide Web

Achievements and Scholarships

06/2021 **ISMB/ECCB Attendance Fellowship Award by ISCB**.

02/2021 **Intern Researcher Fellowship Program by The Scientific and Technological Research Council of Turkey (TUBITAK)**.

06/2016 **National University Entrance Exam**.
Ranked 594th among 2,300,000 participants