Berke Uçar

Senior CS Student
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GitHub Profile
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Education

•Bilkent University, Ankara *2019-2023*
B.Sc. Computer Engineering CGPA: 3.74/4.00

– 100% academic scholarship
– 5 times high honor, 2 times honor student
– 14th among 250 in 2019 cohort

•Balikesir Science High School, Balikesir *2015-2019*
High School Diploma in Maths and Science CGPA: 99.12

– Finished as 3rd in CGPA and 2nd in replacement exam in field of Science and Mathematics
– Ranked 471st in field of Mathematics and Science among 1,880,800 (Universities Entrance Exam 2019)

•Balikesir Science and Art Center, Balikesir *2010-2019*
Special Talented Program Diploma

– Science and Art Centers are constitutions for children who have special talents in science and art. They apply general skill tests for entrance.
– Studied Physics in the project phase for 5 years.
– Attended in Eskisehir regional final expedition and awarded as 2nd in field of Physics

Experience

•MilSoft *07.2022-08.2022*
Cybersecurity Intern Ankara

– Worked on research and development project.
– Trained on transfer protocols.
– Used Java and Apache Mina library.

•Aselsan *06.2022-07.2022*
Algorithms Intern Ankara

– Worked on classification of audio data with Deep Learning applications.
– Experienced on Pytorch, Numpy and Python Applications.
– Used CNN structure for classification.

•Borusan CAT *10.2021-04.2022*
Robotic Process Automation Intern Istanbul

– Developed new Robots to make processes and systems automated.
– Communicated through departments, and obtained and designed the processes that are going to be automatized.
– Used KOFAX Kapow 10, SQL coding language, JavaScript and HTML.

•CRS Soft *06.2021-08.2022*
Software Engineering Intern Istanbul

– Developed a web application called "EaTogether" which helps people to match with groups that is fitting with themselves for eating or drinking together.
– Communicated through departments, and obtained and designed the processes that are going to be automatized.
– Used C#, JavaScript, HTML, CSS, AJAX, SignalR, Google Places API, Entity Framework and jQuery.

Projects

•Cargobot *2022-2023*

An autonomous task and motion planning mobile robot software for cargo loading in cargo spaces.

- Tools & technologies used: PyDrake, PyTorch, Manipulation library by Russ Tedrake, Meshcat.
- Involved AI, deep learning, trajectory optimization, kinematics, and task and motion planning with a group of five.

•Using Minimizer Interarrival Distances for Read-Until Human Read Detection from Blood Samples *2023*

A time-efficient read-until algorithm to detect human genome reads from the samples sequenced by Oxford Nanopore

- Tools & technologies used: DeepSimulator, Run Length Encoding, xxh3 hashing method
- More than 80 percent of the human related reads were detected with a group of three. I was the third author

•Stochastic Properties of Minimizers *2022*

A theoretical model for the interarrival distances of minimizers.

- Tools & technologies used: Btllib, Matplotlib, NumPy.
- Observed the interarrival distances of minimizers on different parameters such as k-mer size and window size with my groupmate.

•Seekin' Cancer *2022*

A set of neural network models to exhibit the effect of optimizer and structure on classification of skin cancer task.

- Tools & technologies used: PyTorch, Matplotlib, NumPy.
- Used VGG, ResNet, SVM, and customized architectures with taking the advantage of pretrained models and transfer learning with a group of five.

Technical Skills and Interests

Programming Languages: Python, C++, C#, Java, JavaScript, SystemVerilog, HTML, CSS, UML, PDDL.
Developer Tools: GoogleColab, Git, Github, BitBucket, Visual Paradigm
Frameworks: PyTorch, Drake, .Net, BootStrap, Apache Mina, Kofax Kapow.
Cloud/Databases: AWS PostgreSQL, MySQL, Microsoft SQL, Google Drive.
Coursework: Advanced Topics in Computational Biology, Introduction to Machine Learning, Deep Generative Networks, Computational Optimization, Data Privacty, Algorithms, Automata Theory and Formal Languages, Principles of Engineering Management, Database Systems, Operating Systems, Data Structures I and II, Basics of Signals and Systems, Object Oriented Software Engineering, Programming Languages, Computer Organization, Digital Design, Algorithms and Programming I and II, Pyhsics I and II, Probability and Statistics for Engineers, Linear Algebra and Differential Equations, Calculus I and II, Discrete and Combinatorial Mathematics, Introduction to Modern Biology.
Areas of Interest: Bioinformatics, computational biology, cognitive artificial intelligence, human-robot interaction, evalutionary robotics, computer vision and perception
Soft Skills: Dynamic, talkative, hardworking, both a team player and leader, disciplined.
Languages: Native in Turkish, Professionally Proficient in English

Achievements

•Selection Exam for Academic Personnel and Graduate Studies 87/100 *16.04.2023*

•International English Language Testing System, Academic 7.5/9.0 *19.11.2022*

•Universities Entrance Exam of Turkey 471st among 1.88 million in Maths and Science branch *17.06.2019*

•TUBITAK Regional Science Fair Expedition, Eskisehir Ranked 2nd in Physics *24.03.2016*

Positions of Responsibility

•Member, TDP/K1L0 Went to leukemia hospital for children to support them mentally *2019-2020*

•School Team, Basketball Player Placed 2nd in Balıkesir in 2017 *2015-2019*

•School Orchestra, Drummer Gave tens of concerts *2016-2018*

•Robotics Team, Software Developer Competed in three competitions including FLL *2015-2017*