OKAN DEMIR BAYKAL

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EDUCATION

Özel Ege Lisesi   Sep 2018 – Jun 2021
Science and mathematics track   *İzmir, Turkey*
- Taking Computer Science A, Calculus AB and BC, Physics I, and Statistics AP courses.

Bahçeşehir Science and Technology High School   Sep 2017 – Jun 2018
Standard Turkish curriculum taught in English.   *İzmir, Turkey*

ACADEMIC & EXTRACURRICULAR ACTIVITIES

Volunteer Laboratory Assistant   Sep 2019 – Present
Özel Ege Lisesi Mechatronics Laboratory   *İzmir, Turkey*
- Mentored 3 teams of 10th Grade students on making of the robotics and software projects:
  * Smart Fridge with Computer Vision Abilities
  * Assistive Device with Facial Feature Recognition for Patients with Autism Spectrum Disorder
  * Radiation Sensitive Unmanned Land Vehicle Platform for Search and Securing of Nuclear Waste
- Researched and organized supply of all initial lab equipment, maintained said equipment and planned further expansion.

Student Researcher   Jun 2019 – Aug 2019
Koç University Summer Research Program   *İstanbul, Turkey*
- Worked under the supervision of Prof. Deniz Yüret in the Koç University AI Lab for 4 weeks on sentiment aware paraphrase generation with deep learning under the Koç University Summer Research Program.
- Learned and utilized Koç University's deep learning framework, Knet.jl, and AutoGrad in Julia.

Introductory Arduino Programming and Electronics Course   Jul 2017
Makerhane   *İstanbul, Turkey*
- Took introductory Arduino programming course in the Arduino IDE.
- Spent an extra week working on Arduino programming and 3D designing a 4U server rack chassis case for a compute in Google SketchUp.

PROJECTS

Personal Website - Ongoing Project   Aug 2020 – Present
baykalokandemir.github.io   *İzmir, Turkey*
- Built and hosted a static site using HTML and CSS on GitHub.
- Componentized site elements and re-built the site in Vue 2 and developed a theming system.
- Planned back-end architecture for authorized login system and blog posting system.

Smart Home Projects - Ongoing Project   Jan 2020 – Present
Personal Project   *İzmir, Turkey*
- Created a 3D model of the house complete with electrical and networking connections.
- Set up a home laboratory and server using a Raspberry Pi and Arch Linux.
- Designed a WallPanel control hub using JSON, HTML, CSS, and REST APIs.

Assistive Glasses for the Vision Impaired   Sep 2018 – Mar 2020
Software and Robotics Project   *İzmir, Turkey*
- Developed computer vision software for obstacle classification and distance estimation using TensorFlow.
- Developed accessibility and setup features such as a voice assistant and setup wizards using gTTS, SpeechRecognition, Java and Android Studio.
- Designed eyeglasses-shaped modular enclosure in 3D using Autodesk Fusion 360.

Academic Honors and Awards

- Ranked 1st place in TÜBİTAK's 50th Ege Regional Science Fair and 2nd place in TÜBİTAK's 50th National Science Fair in Technology Design category with the project "Assistive Glasses for the Vision Impaired".

- Chosen to represent Turkey in Regeneron International Science and Engineering Fair (ISEF) 2020 with the project "Assitive Glasses for the Vision Impaired". Was awarded "Finalist" due to the cancellation of judging in ISEF 2020 because of the COVID-19 pandemic.

- Awarded "Certificate of High Honors" every semester and "Certificate of Honor" every year of high school.

- Finished MITx's 6.00.1x course with a 88/100 grade (equivalent to A grade).

- Participated in URFODU's English and Mathematics contests.

- Participated in Waterloo Math Contests in Gauss, Fryer, Cayley, CSMC, CIMC tests.

- Participated in Waterloo University's Canadian Computing Contest - Senior Level.

Community Service

Book Transcripter and File Manager   Mar 2019 – May 2019

Özel Ege Lisesi   *İzmir, Turkey*

- Took part in the book transcription of Bertrand Russell's "The Conquest of Happiness" for TÜRGÖK (Library for Vision Impaired Individuals of Turkey).

Other

Languages: Turkish (native), English (TOEFL: 107), German (Goethe Institute A1.2)
Programming Languages: Java, Julia, Python 3, C++, JavaScript, HTML/CSS
Frameworks & Libraries: Vue.js, TensorFlow, Keras, PyQt 3, Pandas, Knet.JL, AutoGrad
Developer Tools: Git, AWS, Linux
Other Interests: Guitar, 3D Design and Printing