Erkam Tuna Bayoğlu

CONTACT
INFORMATION

(+90) 549-535-2903
erkam.bayoglu@tubitak.gov.tr

https://erkamtb.tech
erkamtbayoglu@gmail.com

EDUCATION

TUBITAK Science Highschool

Highschool Prep grade - present
September 2022 - present

Aka College Bahçelievler Istanbul

Secondary school, 6-8 grades
September 2019 - June 2022

WORK
EXPERIENCE

TUBITAK BILGEM Mechanical Workshop
Intern
- Covering Basic Mechanical Engineering Fundamentals.
  (Fracture mechanics, Fatigue of Materials, alloys etc.)
- Learning about manufacturing processes.
- Working with CAD/CAM on SolidWorks.

November 2024 - Present

Xynaptics Firm
Programmer
- Developing AI products for client companies.
- Working primarily with Python, APIs, and databases.

July 2024 - Present

TUBITAK MARTEK Robotics R&D Unit
Intern
- Studied on encoders, ROS (specifically Noetic).
- STM32 coding using STM32CubeIDE.

October 2023 - May 2024

PROJECTS

First Robotics Competition
Team Founder & Team Captain
Programming Lead
- In 2024, I focused more on leadership and programming.
- Competed at the Marmara Regional and won.
- Qualified for the World Finals and competed there.

2023 - Present
2023-2024

UUV
Programming Lead
- Developed a unmanned underwater vehicle.
- Used Matek H743 for the control system and
  Raspberry Pi 4B for the computing system.
- Competed at TEKNOFEST; placed 23rd in 2023 and 7th in 2024.

2022 - 2024

Photolaser
Project Lead
- Designed a cost-effective photogate system using
  phototransistors and 5V red lasers.
- Programmed an Arduino to calculate object speed based
  on the time between triggering two phototransistors.

2023 - Present

- Utilized photoblock material for easy assembly and a fixed
  sensor distance for speed calculation.
- Currently working on enhancing the design with
  a railway system and specialized trains to demonstrate collisions.

Detection of Hate Speech on the Web Using AI

Programmer   2024 - Present
- Developed a Chrome extension for detecting and filtering
  inappropriate messages.
- Works on platforms like WhatsApp, Instagram, Reddit using AI.
- Implemented a choice between using an API-based (LLM)
  or running a local model for message analysis.
- Planned future improvements to support all websites and moderate YouTube
  video comments.

Remote-Controlled Vehicle Using Cloud

Self Project   2024 - Present
- Developed a remote-controlled robot car using
  AWS cloud services for internet-based control.
- Built the website interface and backend using
  JavaScript, HTML, and CSS.
- Utilized AWS IoT, Lambda, VPC, API Gateway,
  and MQTT for cloud-side communication.

PMI (Project Management Institute)

Project Lead   October 2024 - November 2024
- Took lessons about project management.
- Gave a presentation about project planning.

TECHNICAL SKILLS

General Purpose Languages
Proficient: Java, Python
Familiar: C++, Kotlin

Web Development
Familiar: PHP, Javascript, HTML, CSS

Database
Proficient: MySQLi, Amazon DynamoDB
Familiar: MSSQL Server, Amazon Aurora

CAD/CAM
Familiar: Onshape, SolidWorks

CERTIFICATIONS & AWARDS

AWS Miuul Bootcamp	November 2024
FRC Marmara Regional Winner	March 2024
Teknofest UUV Finalist	2023 & 2024
TUBITAK 4004 Certificate of Participation	September 2021
URFODU Math Competition Silver Medal	May 2020
FLL 2020 Researcher Award	February 2020
Caribou Contest World 1st	January 2020
Turkiye Math Competition Silver Medal	2020
TALES Math Competition	2019
Codeweek Certificate of Participation	2019