MEHMET SEMIH BABACAN

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EDUCATION

Industrial Engineering, Yildiz Tecnical University 2018 - 2014
GPA: 3.25

Computer Engineering, Yildiz Technical University 2020 - 2024
Dual Degree Student GPA: 3.15

EXPERIENCE

Project Management Intern Aug 2022 - Oct 2022
Baykar Defense / Cezeri Artificial Intelligence Robotics Technologies *Istanbul, Turkey*

- During my internship at Cezeri, I conducted research on state-of-the-art Continuous Improvement and Continuous Deployment infrastructures, specifically GitHub Actions and GitLab CI/CD. I also examined the advantages and disadvantages of Micro Services in relation to our business type. I implemented a system of code analysis and Continuous Development and testing processes, which I presented to my supervisors. Through this research, I gained insight into the field of DevOps and Robotics Operations and contributed to increasing the company's awareness in these areas.

Presidential Research Intern Jan 2022 - July 2022
Scientific and Technological Research Council of Turkey (TUBITAK) *Gebze, Turkey*

- I interned at TUBITAK BILGEM Blockchain Researches Laboratory, where I researched Permissioned Blockchain networks and Central Bank Digital Coins. I developed a Digital Currency for the Central of Turkey utilizing Hyperledger Fabric, Ethereum VM, GoLang, JavaScript, TypeScript, Solidity, Web3js, EthereumJS, IPFS, and researched cryptography in Rust and JS. I also built an NFT creation system to deepen my understanding of Blockchain technology and provided information on novel resources and emerging fields to the team.

Production Intern July 2020 - Aug 2020
KGM Heavy Machinery Manufacturing) *Istanbul, Turkey*

- As an intern at KGM, a conveyor systems manufacturer that customizes its products to meet customer needs, I conducted a thorough analysis of the tools, machines and materials used in the factory. I constructed the flow of products in the factory, measured worker efficiency based on outputs, and performed Work Methods Analysis to identify value-adding and non-value-adding activities in the workflow. Additionally, I conducted benchmarking analysis, SWOT Analysis and Ergonomic Analysis of the working environment and employee working conditions. At the end of my internship, I presented my findings and insights to the head of the company.
- Overall, during my internship, I gained experience in Operations Management by analyzing the factory's production processes and identifying areas for improvement. My analysis and recommendations demonstrated my ability to think critically, problem solve, and effectively communicate findings to key stakeholders.

SKILLS

DevOps	Continous Integration and Continous Deployment
Project Management	Asana, Jira, Excel
Programming Languages	Python, JavaScript, Dart, C, C++, Rust, R, MATLAB
Mobile Application Development	Flutter, Firebase, Supabase
Business Intelligence	Tableau
Cloud and Web Development	React, NextJs, GatsbyJs, ExpressJs, Web3Js, Sanity, Vercel, SQL
Data Science	Python (Pandas, Polars, Numpy, Tensorflow, Scikit-Learn, Matplotplib), R
Optimization	GAMS, Python (Gurobi, OR-Tools)
Developer Tools	Git, Vim, VS Code, Android Studio, IntellijIDEs
Spoken Languages	English - Working Proficiency, Spanish - Intermediate, Turkish - Native

UNIVERSITY RESEARCH CLUB EXPERIENCES

Deep Learning Engineer in Real Time Applications Nov 2020 - Aug 2021
Alternative Energy Systems Club / Yildiz Technical University *Istanbul, Turkey*

- As a member of a renowned car-making student club that consistently wins awards, my task was to improve the object detection algorithm and conduct research on novel publications and methods to enhance our real-time object detection capabilities for the national competition of Autonomous Cars. By utilizing Nvidia's TensorRT and TKDNN frameworks, taking advantage of C language's efficient performance, training object detection models for real-time applications, structuring data for the AI model and utilizing Tableau to better understand the dataset, I was able to bring a new approach to the team and improve our understanding of the data gathering process. These efforts resulted in a 400% improvement in inference rate (FPS) from an average of 36 to 140 in real-time applications.

VOLUNTEERING AND LEADERSHIP

Rising Star Scholarship Holder Feb 2021 - Nov 2022
Turkish Technology Team Foundation *Istanbul, Turkey*

- As a scholarship holder of the Turkish Technology Team Foundation (T3), I underwent training in technology and entrepreneurship, including software development, AI, the internet of things, financial management, marketing and legal aspects of entrepreneurship, mentored by industry experts and entrepreneurs. I had opportunities to network and showcase my skills in competitions and events, and received support for my technology-based projects. I helped to organize of Teknoest and participated in TakeOff International Startup Summit. I developed projects and implemented them in the course of my scholarship. Notable ones are;
- **Scholarship Evaluation System:** I developed a scholarship evaluation system to streamline the process of evaluating and matching applicants' statements. The system automates the querying of applicants, downloading and evaluating the validity of their statements and provided documents. Additionally, the system provides staff with easy access to applicant documents and the ability to edit data through a desktop application. This application made the process faster since there are thousands of applicants.
- **Technology Movement Analysis:** As T3, the organization has a great source of information from the competitors that were about 600.000 in the previous year's domestic competition. Having data at that scale, I prepared a project to analyze the data, creating a map of Turkey of the technological inclinations of the youth and by using Tableau, preparing a presentation to be presented to the municipalities and the organizations to improve the conditions further and direct the money-spent for the projects and resources in a more efficient manner as being aligned with the vision of Technology Leader of Turkey.

Mobile Application Developer Scholar Nov 2022 - July 2022
Google Turkey and Republic Of Turkey Ministry of Industry and Technology *Istanbul, Turkey*

- As a selected scholar in a Mobile Application Development project initiated by Google, Republic Of Turkey Ministry of Industry and Technology, Turkish Technology Team Foundation, and Turkey Entrepreneurship Foundation, I underwent seven months of training in Mobile Application Development with Flutter, Entrepreneurship, Financial Management, Human Resources, and Legal Sides of Entrepreneurship, and completed Google's Project Management Specialization. I developed the backend of the application, wrote the entire application, and presented it to a jury in a final competition. My team's app, Hesap, a contactless paying and ordering application for restaurants and coffees, won the competition. (See the Repo and Try it) (See the Landing Page) *Istanbul, Turkey*

EXTRA-CURRICULAR ACTIVITIES

- I actively develop mobile applications, web applications and desktop applications and for those, I like to collaborate with the people around me since they always have an idea. I love to spend my free time helping people and trying to come up with new things and build them.