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Education

Sabanci University, Istanbul, Turkey — Sep 2019 - June 2024
Bachelor's Degree, Computer Science Major %50 Scholarship

- **Selected courses:** Advanced Programming (C++), Systems Modelling & Control, Data Science & Analytics (Python), Data Structures, Database Systems (SQL), Programming Languages for Logic, Functional and Parallel Programming, Logic & Digital System Design, Operating Systems (C, Linux), Mobile Application Development (Swift, Flutter), Computer Networks, Machine Learning (Python), Computer Graphics (Java), Algorithms, Internet of Things Sensing Systems, Software Engineering (Full-Stack Development), Cybersecurity Practices & Applications (Kali Linux)

Sabanci University, Istanbul, Turkey — Sep 2018 - June 2018
Foundation Development Year %50 Scholarship

Çakabey Science High School, Izmir, Turkey — Sep 2014 - June 2018
High School Graduation %75 Scholarship

Skills and Credentials

Programming: Python, C, C++, C#, JavaScript, TypeScript, Swift, Flutter, React, SQL, MATLAB, Bash (Shell Scripting),
Assembly, Scheme, Prolog, Verilog, XML, CSS, Kali Linux, Firebase, Flask, HTML, Postman, Git
Languages: Turkish(native), English (fluent)

Work Experience

PulpoAR, Izmir, Turkey — April 2024 – July 2024
Junior Frontend Developer

- Contributed to the development of Virtual Try-On Technology for makeup and skincare products, utilizing AR & AI for online/offline stores and the Metaverse.
- Developed web pages for the Data Studio app using TypeScript and React, enhancing user interface and experience for multi-brand AR product libraries. (Mantine, Redux)
- Worked on flexible pricing models and partner services, ensuring achievable and affordable solutions for clients.

INOV8, Istanbul, Turkey — May 2023 – Sep 2023
Full-Stack Development

- Worked collaboratively within a Scrum framework to develop both frontend and backend code for a startup specializing in selling 3D printed products online, alongside Sabanci University students and graduates. (JavaScript, React, Firebase)

Encom Networks, Istanbul, Turkey July 2022 – Sep 2022

Training & Development Intern

- Specialized in developing cutting-edge embedded software for M2M gateways and devices, adhering to ETSI M2M standards, with a focus on innovative solutions for seamlessly connecting small M2M area networks into a decentralized cloud based M2M network, ensuring universal access to diverse device types. (Bash, Shell Scripting)
- Leveraging Linux OS and tools, also optimized for resource-limited platforms like ARM and MIPS architectures. (Docker Container)

Projects

Turkish Travel Website Honeypot

- Developed a Flask-based honeypot web application for a Turkish travel advice/news website, incorporating dynamic content delivery through RSS feeds, advanced user authentication mechanisms, and an interactive comment system. (Python3, Flask)
- Designed with robust security logging, the project serves educational and security testing purposes, with additional scripts provided for CAPTCHA bypass and brute force attacks to enhance understanding of cybersecurity principles.
- Implemented features such as multi-factor authentication and vulnerability testing scripts, contributing to a comprehensive platform for studying and mitigating online threats. (Kali Linux)

Tune-Mosaic Project

- Spearheaded the development of a music analysis and recommendation system that consolidates liked-song data from diverse sources. Implemented robust backend functionality for data processing and analysis, ensuring accurate and insightful music recommendations.
- Designed an intuitive front-end and mobile interface for users to interact with the system, enhancing the overall user experience. The project showcases a deep understanding of data analysis and user-centric design principles. (React, Swift, Firebase, Postman)

Self-Hosted Video Conferencing Tool (Graduation Project)

- Developed a secure, open-source self-hosted video conferencing platform to address privacy concerns in commercial offerings. Leveraged Jitsi Meet for core functionality while implementing enhancements for scalability, memory management, and user interface.
- This project demonstrates expertise in open-source software development, security best practices, and user centered design. (Linux, Jitsi Meet, Web Development Frameworks, Cloud Hosting)

Drowsiness Detection System Website

- Developed a CNN-based Autoencoder system for anomaly detection in ECG data, exploring various loss functions and generating insightful visualizations to evaluate model performance. (Python3, Wireshark)
- Contributed to the advancement of deep learning techniques in medical anomaly detection, particularly in cardiovascular health, through rigorous experimentation and analysis.
- Developed a CNN-based Autoencoder system for anomaly detection in ECG data, alongside a comprehensive web application that includes user authentication and database initialization functionalities. (JavaScript, Flask)

Basketball Teams and Leagues Analysis Project

- Examined the success of basketball teams based on the performance of star players using machine learning models (Decision Tree, Random Forest) and efficiency score calculations. (Python, sklearn, seaborn)
- Analyzed NBA player data to compare efficiency scores with the NBA's current efficiency calculation method, achieving an accuracy of 54.3% with Random Forest. (Pandas, NumPy)

- Demonstrated the importance of feature selection and model choice in predicting team success in basketball leagues.

Netflix Controller Project
- Developed a Netflix controller application that interfaces with a database to manage favorite and popular movies, allowing users to add, remove, and browse movies for easier decision-making. (C++)
- Enhanced user experience through personalized recommendations and seamless interaction with the movie database, offering a convenient solution for navigating extensive movie libraries. (Node.js, MySQL)

Digital Combination Lock
- Utilized an Algorithmic State Machine methodology to design and execute a digital combination lock system. Spearheaded the development of the controller and mapped out the circuitry pathway for seamless implementation. (Verilog, Prolog)
- Wrote an essay detailing the results and all stages of the study and defended it to the committee.

IMDB Rating Prediction
- Developed machine learning models for predicting movie ratings from provided datasets. (Python)

House Price Prediction
- Utilized Python to construct a neural network-based regressor (with ANN and CNN) for predicting house prices using the provided dataset. (Python)

References

Prof. Dr. Selim Balcısoy, Professor of Computer Science at Sabanci University, balcisoy@sabanciuniv.edu
Prof. Dr. Gülşen Demiröz, Professor of Computer Science at Sabanci University, gulsen.demiroz@sabanciuniv.edu

Extra-Curricular Activities

Sabanci University, Istanbul, Turkey — Jan 2019 - May 2019
Civic Involvement Project
- Taught underprivileged third-grade students basic mathematics, natural sciences and social sciences. At the end of our project, brought them to our campus to entertain with different social activities and games.

Sabanci University, Istanbul, Turkey — Jan 2020 - Jan 2024
Head Coach & Team Captain of Sabanci Seahawks
- Prepared a training program for the girl's flag football team.
- Played as a team captain in the University League.