

# BARISCAN KOSE

Toronto, ON

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- Education** ***IoT & Machine Intelligence Graduate Certificate Program*** **[09/2023 - 04/2024]**  
*Sheridan College, ON, Canada*
- Engineered a smart irrigation system with ESP-32 and moisture sensors; acquired proficiency in FANUC robotics and PLC programming; utilized RTOS concepts on MPLAB X IDE, ICD3 debugger and PIC24 motherboard.
- Bachelor of Science in Electronics Engineering*** **[08/2017 – 07/2022]**  
*Sabanci University, Istanbul, Turkey*
- Machine Learning, Microprocessor-Based System Design, Biomedical Instrumentation, Signal Processing, Cryptography, Computer Vision, Semiconductor Physics, MEMS.
  - Placed top %0.1 in national university-placement examination leading to full merit-based scholarship.
  - GPA 3.23/4.00 (Dean’s List: High Honor)
- Skills**
- Programming:** C/C++, Assembly, Verilog, MATLAB, Shell (Makefile), Python, PyTorch, TensorFlow, SQL, Java, Spring Boot, JavaScript, React, HTML/CSS.
  - Frameworks & Tools:** RTOS, Linux (Ubuntu, Kali), Docker, Git, Jira, TCP/IP protocols, Wi-Fi, I2C, SPI, UART, FPGA, ARM Cortex, PIC microcontrollers, ESP32, Arduino, oscilloscopes, multimeters, LTSpice, Simulink, Advanced Design System, Xilinx, IAR Embedded Workbench IDE, Note Management Systems.
  - Languages:** English (IELTS C2), Turkish (Native), French (TEF B2)
- Work Experience** ***Full-Stack Software Developer*** **[05/2024 – 12/2025]**  
*Electric Mind, Toronto, Canada*
- Built backend microservices for fleet management replatforming with Java, Spring Boot, GraphQL, and AWS (Lambda, CloudFormation, CodePipeline).
  - Designed SQL Server databases for brokerage master-data management; built full-stack apps with Django, HTMX, Tailwind, and React.
  - Delivered Salesforce solutions using Apex, LWC, and JavaScript; integrated Twilio recordings with OpenAI for automatic call summarisation.
  - Designed and developed a generative AI transaction search application and AI voice-agent platform using Azure AI Foundry, BlandAI, Flask, and React.
- Embedded Software Engineer*** **[03/2023 – 08/2023]**  
*Airties, Istanbul, Turkey*
- Spearheaded the development and refinement of firmware for WiFi extenders, enhancing device connectivity and performance using C/C++, Linux, and Shell scripting.
  - Prepared and presented task progress updates in weekly status meetings to team members and global partner companies across Asia, Europe & North America.
  - Advanced AT&T All-Fi Hub device capabilities through the integration of cutting-edge networking protocols and algorithmic enhancements, leveraging GIT, SVN, Broadcom BSP, HALs and TCP/IP expertise.
  - Elevated system reliability by employing GDB for rigorous debugging processes, resolving backtrace complexities, and effectively managing dynamic shared libraries.

**Data Scientist****[02/2022 – 03/2023]***Turing, California, USA (Remote)*

- Designed and implemented Python-based data ingestion and processing workflows using third-party APIs (including Clearbit, Apollo, SendGrid, and MAPP SFTP) to prepare and analyze structured datasets related to growth and customer engagement.
- Extracted, transformed, and analyzed data using SQL in Mode Analytics and Google BigQuery to create analytical datasets supporting hypothesis testing, performance measurement, and data-driven growth decisions.

**Machine Learning & Embedded Software Engineering Intern****[06/2021 – 08/2021]***Ideaktif Consultancy & Software LLC, Izmir, Turkey*

- Innovated an embedded SOS feature for ID cards utilizing ESP-32 motherboards and iBeacon-type beacons, significantly bolstering hospital emergency responses.
- Devised a predictive sales model with TensorFlow, dissecting variables such as time, pricing, and market positioning to enable informed business strategies.

**Voluntary Work** **Civic Involvement Project****[Winter 2019]**

- Orchestrated and executed a series of programs at Metin Sabancı Schools for Special Education, tailored to enrich the lives of individuals with cerebral palsy and diverse disabilities.

**Selected Projects** **Remote Beehive Monitoring System (Graduation Project)****[09/2021 – 05/2022]**

- Engineered an innovative beehive health monitoring solution, deploying temperature and humidity data acquisition via SHT-15 and LM35 sensors to a global AWS server using a cost-efficient SIM808 GPRS/GSM module paired with an Arduino UNO, aimed at mitigating colony collapse disorder.
- Nominated for the prestigious TUBITAK 1512 BiGG Uludag University Entrepreneurship Support Program for its potential impact on environmental sustainability.

**Ensemble ML Pipeline for Stock Price Prediction with Technical Analysis on VPS****[03/2022]**

- Developed a sophisticated 3-tier ensemble machine learning pipeline on my virtual private server, integrating CatBoost, LightGBM, and Deep Neural Networks, complemented by a Local & Parallel Folding strategy, to harness technical & fundamental analysis for the prediction of US stock market trends.
- Implemented a robust data pipeline featuring meticulous pre- and post-processing steps, utilizing PostgreSQL, Ubuntu Linux and 3<sup>rd</sup> party APIs for continuous real-time market data extraction.

**E-Commerce Website & Mobile Application****[Spring 2021]**

- Led the front-end development of an e-commerce web and mobile platform as part of a six-member Scrum team, delivering an engaging user experience through meticulous HTML, JS, CSS, ReactJS, and Redux implementations.
- Took the initiative in crafting a responsive and intuitive interface, contributing to the platform's market competitiveness and user satisfaction.

- References**
- References available upon request.