

Mert Demirtas

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EDUCATION

University of Warwick

MSc Computer Science – Merit

September 2026

Coventry, UK

Kocaeli University

BEng Computer Engineering

December 2023

Kocaeli, Turkey

EXPERIENCE

ICRON Technologies

Software Engineer Intern

July 2023 – August 2023

Istanbul, Turkey

- Designed and implemented a **C#/.NET desktop diagram controller** using **WPF** and **DevExpress**, enabling administrators to create, edit, and manage system data through an interactive visual interface.
- Built validation workflows and reusable UI components for diagram manipulation, data editing, and visualisation, improving consistency and maintainability across the application.

IBTECH – QNB Finansbank

Software Engineer, Part-Time

December 2021 – July 2022

Istanbul, Turkey

- Developed and maintained production iOS features in **Swift**, **Objective-C**, and **UIKit** for the **QNB Finansbank Mobile App**, serving **1.7M daily users**.
- Investigated and fixed production crashes using **Firebase Crashlytics**, identifying root causes from crash reports and improving app stability for a large-scale mobile banking application.
- Refactored legacy **Objective-C** modules into **Swift**, reducing page load times by up to **30%** while preserving feature parity and improving maintainability.

White-Cad Technologies

Software Engineer Intern

September 2021 – October 2021

Kocaeli, Turkey

- Developed a web analytics dashboard using **JavaScript**, **CSS**, and **Chart.js** to visualise product and customer metrics.
- Integrated **REST API** communication between the front-end and **C#** back-end using **jQuery**, enabling dynamic data retrieval and display.
- Debugged and updated legacy back-end methods responsible for client-side failures, improving reliability of the analytics dashboard.

PROJECTS

Training-Time Detection and Mitigation of Memorisation in Graph Neural Networks | *MSc Dissertation*

- Built a reproducible **Python/PyTorch Geometric** pipeline for **GCN** and **GraphSAGE** models, combining checkpoint-gradient extraction, exact leave-one-out retraining, and graph-aware evaluation on **Cora** and **CiteSeer**.
- Showed that an epoch-20 gradient signal strongly ranked later memorisation ($r_s \approx \mathbf{0.84}$), while targeted edge suppression reduced policy-level memorisation by **25.5%** on Cora and **28.5%** on CiteSeer, exposing a target-level accuracy trade-off.
- Profiled the prospective method at approximately **35× lower projected cost** than exact leave-one-out evaluation over the same top-10% target population.

Spell Checker

- Built a full-stack spell-checking application using **Python**, **Flask**, and **JavaScript**, implementing a **Trie-based dictionary** for efficient prefix search and autocomplete.
- Designed a **Levenshtein Distance-based suggestion engine** to generate ranked correction candidates for misspelled words.

VOLUNTEERING

iOS Development Bootcamp Assistant – Patika.dev

September 2022 – November 2022

- Mentored **33 students** on **Swift**, **UIKit**, design patterns, and third-party frameworks through code reviews, debugging support, and hands-on programming exercises.