Ömer Kılınç

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Computer engineering major with a keen interest in advanced mathematics, complex design and system architecture. Experienced with designing and constructing advanced software systems from scratch.

Education

Middle East Technical University May 2025
Undergraduate - Computer Engineering *Ankara, Türkiye*

Lodz University of Technology May 2022
Exchange Program - Information Technology *Lodz, Poland*

Ankara Atatürk Lisesi May 2019
High School *Ankara, Türkiye*

Technical Skills

Web Development: Flutter, React, Node.js, Redis, Vite

Cloud Computing: Docker, Firebase, Firebase SDK, Google Cloud IAM, GCP

Graphics: OpenGL (C++), Open3D (Python), OpenCV (C++), PDAL, laspy

Dev Tools: GDB Debugger, GHidra Decompiler, Vim, git, CMake, Bash

Project & Collaboration Tools: GitHub, GitLab, Atlassian

Professional Experience

Yapı Kredi Teknoloji 09 Jan 2023 – 14 July 2024
Software Developer (Part-time) *Remote*

- Refactored legacy code and integrated services.
- Worked with a cross-functional team of developers and analysts.
- Developed Frontend and Backend following Agile/Scrum methodologies.
- **React.ts, Maven, Java, Spring Framework**

Startup 14 July 2024 – Nov 2024
Co-Founder *Ankara, Türkiye*

- **System Architecture:** Designed data, action and transaction flows for consistent, modular development.
- **UI/UX Design:** Developed wireframes and prototypes in Figma.
- **Mobile App Development:** Built a full-featured app from scratch using Flutter framework. Integrated Firebase services as serverless backend. Tested on Xcode Emulators and physical devices.
- **Analytics & Automation:** Implemented Firebase Analytics and Google Apps Script for automation and tracking.
- **Secure Payment Processing:** Integrated Stripe for online and in-app payments, optimizing both frontend and backend performance for better payment experience.
- **Security & Access Control:** Configured MFA, IAM roles and Google Admin Console security policies, complying secure-by-design principles.
- **IoT - eSIM Integrations:** Enabled IoT eSIM connectivity for consumer devices using BICS and 1Global APIs.
- **Regulatory Compliance:** Studied ENISA, FCC and EU tax regulations for legal and operational adherence.

Academic Research

Remote Dynamic eSIM Provisioning for Consumer Devices

Jan 2024 – Present

Researcher

WINS Lab, Ankara, Türkiye

Wireless Systems, Networks, and Cybersecurity (WINS) Lab

Advisor: Prof. Dr. Ertan Onur

Research on the feasibility of a remote, dynamically provisioned eSIM system that automatically switches carrier profiles based on an adaptive algorithm.

The goal is to develop a simulator that demonstrates whether the eSIM provisioning of GSMA consumer architecture can be securely optimized by mimicking the existing IoT provisioning mechanisms on consumer devices.

Through simulations, this research aims to analyze the technical and economic viability of a usage based billing where consumers do not have subscriptions to Mobile Network Providers but choose the best service in a particular area.

Projects

TRUCK | *LiDAR Processing, Open3D, Google Cloud Run, Docker, Three.js*

- Developed a containerized processing pipeline to analyze truck LiDAR scans and images for volume estimation and feature extraction.
- Implemented a modular system with LiDAR point cloud processing, mesh generation and volume calculation using Open3D.
- Integrated GCP for data storage, authentication and UI hosting
- Utilized Three.js to render interactive 3D models from processed LiDAR scans on the web app.

Personal Website | *React.js, Firebase, Google Analythics*

- Built a personal website with a personal blog page.
- Implemented interactive blog management.
- Optimized for high performance and minimal downtime.

eSIM App | *IoT SMS API, IoT Data Acceess API, Flutter*

- Developed a phone application that allowed remote conditional updates.
- Implemented a token based security system.
- Integrated Stripe payment system.
- Designed an automated mechanism for network selection based on user data consumption patterns.