

Samet Bayat

Freelance Android Developer

Electrical-Electronics
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# Summary

I am a freelance Android Developer and Electrical-Electronics Engineering student. I have a passion for mobile development and I am always looking for new challenges. I am a quick learner and I am always eager to learn new technologies. I have experience with Kotlin, Java, Python, MATLAB, JavaScript, React, Bootstrap, HTML, CSS, Android Development, Spring Boot, JWT, Retrofit, Room, Coroutines, MVVM, Flows, Data Binding, Paging 3, Ktor, Dagger Hilt, Jetpack Compose, ESP32, Raspberry Pi, OpenCV, TensorFlow, Machine Learning, Robotics, Automation, PostgreSQL, MongoDB, RealmDB, SQLite, Git, etc. I have developed a couple of Android applications and I have contributed to a couple of projects. I am currently working on a robot arm project for agriculture applications. I am also interested in motion house cinema, stop motion animation, existentialism, pictures, art basketball theory, poetry, Raspberry Pi & ESP hobby projects, paintings, and debates. My favourite director is Krzysztof Kieślowski (Dekalog, Three Colours trilogy, Camera Buff) and my favourite writers are Albert Camus (The Myth of Sisyphus, The Stranger) and Yusuf Atılgan (The Loiterer).

### Education

- Degree: Bachelor of Electrical-Electronics Engieering
  - o University: Başkent University
  - o Scholarship: 100%
  - o Year: Agu 2019 Jun 2020, Sep 2022 Jan 2025
  - o Expected Graduation Date: Jan 2025
  - o GPA: 3.77/4.00
- Degree: Bachelor of Chemical Engineering
  - o University: Hacettepe University
  - o Year: Agu 2020 May 2022
  - o Status: Not graduated
  - o GPA: 3.15/4.00 (2<sup>nd</sup> year)
- Degree: High School
  - o School: Ayşeabla Science High School
  - o Scholarship: 100%
  - o Year: 2015 2019
  - o Status: Graduated
  - o GPA: 97.35/100

## Languages

- Turkish (Native)
- English (Upper-Intermediate / Advanced)
- German (Elementary Ich kann ein bisschen Deutsch sprechen.)
- Turkish Sign Language (Beginner)

#### Skills

#### Kotlin

Android Development, Jetpack Compose, Ktor, Dagger Hilt, Retrofit, Room, Coroutines, MVVM, Flows, Data Binding, Paging 3

#### Java

Android Development (for legacy projects), Spring Boot, JPA, Hibernate, Spring Security (JWT)

#### **JADX**

Decompiling jars, APKs, Ethical Reverse Engineering

#### Web Development

React (Beginner-Intermediate), Bootstrap, HTML, CSS (Beginner-Intermediate), JavaScript, TypeScript (Still learning)

#### Python

Machine Learning, Tensorflow, OpenCV | Beginner-Intermediate, Flask | Beginner, Data Analysis | Beginner, Web Scraping (BeautifulSoup) | Upper-Intermediate

#### MATLAB

Engineering Toolboxes, Image Processing, Signal Processing, Machine Learning, Simulink

#### С

To manage microcontrollers

#### C++

I wrote a simple 'Library Management System' with C++ for my university project in 2019, I have not much experience with it.

#### C#

I developed a couple of simple mobile applications with .NET MAUI (I contributed a closed source project - Android Accessibility Service that uses Rest API)

#### AppleScript

Occasionally, I write scripts to automate my daily tasks on macOS.

Assembly, VHDL, Verilog, Smali, Swift, Dart, Flutter, Spice

Just for fun, I have not much experience with them.

#### Database

PostgreSQL, Room, MongoDB, RealmDB, SQLite

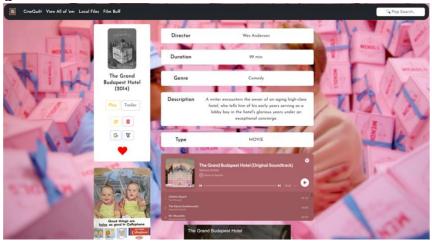
### Version Control

Git

# **Projects**

### • CineQuilt

- o Description: A personalized movie & TV show streaming platform.
- o For: Term Project
- o Role: Full Stack Developer
- o Status: Completed (Oct 2023 Jan 2024)
- o Technologies: React, Bootstrap, Java Spring Boot, PostgreSQL, Gradle, TMDb API, Python, BeautifulSoup, Spring Security, JWT, Netlify, Render, DLNA, OpenAI API, Spotify API, Deezer API, Google SMTP.
- o Accomplishments:
  - Developed the front-end with React and Bootstrap.
  - Implemented the back-end with Java Spring Boot and PostgreSQL.
  - Organized and orchestrated the project with Gradle.
  - Fetched data from TMDb API and various other APIs.
  - Processed content data with Python and BeautifulSoup.
  - Implemented user authentication and authorization with Spring Security.
  - Stored user data with JWT and Spring Security.
  - Generated and sent automated emails with Google SMTP.
  - Implemented DLNA for local network streaming.
  - Integrated OpenAI API for content recommendation. (Film Buff)
  - Spotify and Deezer API for soundtrack recommendations.
  - Deployed the app on Netlify and Render.
- o GitHub:
  - CineQuilt Frontend
  - CineQuilt Backend, Spring Boot
- o Quick Look:



#### • Localoedon

o Description: DLNA media stream app for Android.

- o Status: Completed (Summer 2021 Occasionally Updated)
- o Technologies: Java, Kotlin, Android Studio, Volley, ExoPlayer2.

#### • Ctrl + C (ssClipboard)

- o Description: Clipboard manager, text expander and text box assistant for Android.
- o For: Personal Project
- o Role: Full Stack Developer
- o Status: Completed (Summer 2023 Occasionally Updated)
- o Technologies: Kotlin, Android Studio, Room, Coroutines, MVVM, Data Binding, Android Accessibility Service, Rest API, Google Apps Script, JavaScript, HTML.
- o Accomplishments:
  - Developed the app with Kotlin and Android Studio.
  - Implemented the database with Room.
  - Text expander database stored in NoSQL format (due to Accessibility Service limitations).
  - Managed asynchronous tasks with Coroutines.
  - Organized the project with MVVM.
  - Implemented data binding for the UI.
  - Developed an Android Accessibility Service that uses a Rest API.
  - Developed a Google Apps Script that uses a Rest API.
  - Developed a small scale translate API with Google Apps Script + Google Sheets.
  - Developed a simple web app with JavaScript and HTML.

#### o Note:

 Because of the app has features that can be easily abused (like a keylogger), I do not share the source code.

### o App Features:

- Text Expander
- Text Box Assistant
- Global Clipboard Manager (Clipboard History can be accessed from anywhere: Android app (mobile, tablet or TV), web app / via browser, Google Sheets)
- Text Scanner (OCR)
- Swipe to Delete & Share
- Dark Mod

# • A Comprehensive Review Of Face Detection, Tracking & Face Swap Algorithms With Matlab Applications

- o Description: In this study face/feature detection, feature tracking and face swap applications handled and evaluated with Viola Jones, KLT and MPB algorithms. The work includes three different applications: 'Real Time Face Tracking', 'Image Editing/Blending' and 'Video Editing/Blending'. The open-source content of Mahmoud Afifi (York University) is used as the video processing dataset and MATLAB code guide. The aim is to examine the algorithms in detail, how MATLAB used it and to determine the proportionality of the application-theoretical knowledge common shares.
- o For: Term Project
- o Role: Researcher, Developer
- o Status: Completed (Sep 2022 Dec 2022)
- o Technologies: MATLAB, Viola Jones, KLT, MPB, OpenCV
- o Accomplishments:
  - Developed the applications with MATLAB.
  - Analyzed the Viola Jones, KLT and MPB algorithms.
  - Evaluated the algorithms with real-time face tracking, image editing/blending and video editing/blending applications.
  - Used Mahmoud Afifi's open-source content as a guide.
  - Determined the proportionality of the applicationtheoretical knowledge common shares.
  - Wrote a comprehensive report on the study.
- o GitHub:
  - (Repository will be public after the publication of research paper)
  - Face Detection, Tracking & Face Swap Algorithms

#### Hoops Insight

- o Description: A basketball players' statistics and analytics platform. Mostly to improve my skills in Jetpack Compose.
- o For: Personal Project
- o Role: Full Stack Developer
- o Status: Completed (Fall 2023)
- o Technologies: Kotlin, Android Studio, Jetpack Compose, Dagger Hilt, Retrofit, Coroutines, MVVM, Flows, Paging 3, Room, Ktor, Palette API, Python, BeautifulSoup.
- o Accomplishments:
  - Developed the app with Kotlin and Android Studio.
  - Implemented the dependency injection with Dagger Hilt.
  - Managed network requests with Retrofit and Coroutines.
  - Organized the project with MVVM.
  - Stored cached data with Room.
  - Fetched data from Ktor API.
  - Processed content data with Python and BeautifulSoup.
- o GitHub:
- o (Repositories will be public after evaluating the code quality)
  - Hoops Insight Front-end
  - Hoops Insight Back-end, Ktor
  - Hoops Insight Back-end, Flask



#### • More Projects on Github

#### o Gemini API Demo App

- Description: An Android application that demonstrates the Gemini API. Developed in a short time to learn the Gemini API and discover its capabilities.
- For: Personal Project
- Role: Developer
- Status: Completed (Dec 2023)
- Technologies: Kotlin, Android Studio, Retrofit, Jetpack Compose, Gemini API
- Accomplishments:
  - Developed the app with Kotlin and Android Studio.
  - Managed network requests with Retrofit.
  - Organized the project with Jetpack Compose.
  - Fetched data from the Gemini API.
  - Lasted 2 hours from the idea to finish.

### o Samsung SPen SDK Demo App

- Description: An Android application that demonstrates the Samsung SPen SDK. Developed in a short time to learn the Samsung SPen SDK and discover its capabilities.
- For: Personal Project
- Role: Developer, Bug Hunter
- Status: Completed (Summer 2023)
- Note (for the curious): I found a bug in the Samsung SPen SDK about BLE only SPens and reported it to Samsung. Waiting for a response.
- Technologies: Java, Kotlin, Android Studio, Samsung SPen SDK.
- Accomplishments:
  - Developed the app with Java and Kotlin.
  - Fetched data from the Samsung SPen SDK.

### o ESP32 Capacitive Touch as a Keyboard

- Description: An ESP32 project that uses capacitive touch as a keyboard. Developed to learn ESP32 and capacitive touch.
- For: Personal Project
- Role: Developer
- Status: Completed (Summer 2023)
- Technologies: C, ESP32, Capacitive Touch
- Accomplishments:
  - Developed the project with C.
  - Used capacitive touch as a keyboard input.

- o Android as Server
  - Description: This project demonstrates how to run an HTTP server in an Android app with Ktor.
  - For: Personal Project
  - Role: Developer
  - Status: Completed (Jan 2024 Ongoing)
  - Technologies: Kotlin, Android Studio, Ktor
  - Accomplishments:
    - Developed the app with Kotlin and Android Studio.
    - Ran an HTTP server in an Android app with Ktor.
    - Used the server to serve an API that controls the device's features (like volume, brightness, etc.)
- Bluetooth Speaker with Bandpass Filter
  - o Description: A Bluetooth speaker project that uses a bandpass filter. Developed to learn bandpass filters and audio processing.
  - o For: Term Project
  - o Role: Developer, Team Leader
  - o Status: Completed (Spring 2023)

### Ongoing Projects:

- Robot Arm with Computer Vision for Agriculture
  - o Description: A robot arm project that helps in agriculture uses computer vision. Developing to learn robotics and automation.
  - o For: Graduation Project
  - o Role: Developer, Researcher
  - o Status: Ongoing (Feb 2024 Jun 2024)
  - o Technologies: C, Python, Raspberry Pi, OpenCV, TensorFlow, Machine Learning, Robotics, Automation

# Intern Experience

- Company: Assan Electronics Inc.
- Position: R&D Intern
- Dates: Agu 2023
- Description: I developed applications to facilitate daily life in the company (Handwriting Scanner, Bunch of APIs powered by Google Apps Script etc.)

# Courses & Programs

- Amgen Biotech Experience Program, ODTÜ & Amgen Foundation, 2016
- A Critical Look at Tarkovsky's Cinema, 2020
- Debate Skills Program, Başkent University, 2023
- Artificial Intelligence & Machine Learning Algorithms, Başkent University, 2022
- Integrated Circuit Design EEM 410, Başkent University, 2024
- Couple of Coursera, Udemy, Udacity courses about Android Development, Machine Learning, Web Development, etc.

### Interests

- Motion Pictures
- Art House Cinema
- Stop Motion Animation
- Existentialism
- Basketball Theory
- Poetry (Turkish)
- Raspberry Pi & ESP Hobby Projects
- Paintings
- Debating

# Inspirations

- Whitcomb L. Judson
- Sir Alsatir Pilkington
- Oktay Sinanoğlu
- Hedo Turkoglu
- Cemal Safi, Orhan Veli Kanık & Melih Cevdet Anday
- Krzysztof Kieślowski, Wes Anderson, Stanley Kubrick, Zeki Demirkubuz
- Albert Camus, Yusuf Atılgan

For digital version of my CV, click here

For fun version of my CV, click here