



Emrecan Körpınar

Computer Engineer

About me

I am a Computer Engineering graduate, excited to bring my passion for software technologies into my professional career. Throughout my education, I built a strong foundation in software development, algorithm design, and problem-solving. With a **GPA of 2.77**, I actively contributed to the **IT** department during my internship, gaining comprehensive knowledge of departmental responsibilities and resources. This experience deepened my interest in virtualization, operating systems, and network technologies. Earlier in my journey, I explored game development using graphics libraries and game engines. Currently, I am particularly focused on **cloud systems** and aim to advance my career in this field. I develop software aligned with **SOLID principles** and design patterns. I use **Git** for version control and have project management experience with Agile methodologies. I am proficient in **CI/CD** pipelines, familiar with **Linux** Bash, and actively develop on **WSL**. I have strong expertise in relational databases, applying **CRUD** operations effectively in projects such as airport and student information systems. I resolved data conflicts through transaction management and locking mechanisms, ensuring consistency and concurrency.

With a solid background in **algorithm analysis, data structures**, and software design, I approach complex problems with a systematic and patient mindset. I am knowledgeable in application **security and general security awareness**, paying close attention to data access, authorization, and secure coding practices. I am familiar with operating systems and virtualization tools (VMware), and I have foundational knowledge of **Docker and Kubernetes**, with a strong interest in container-based architectures. In front-end projects, I adopt a **pixel-perfect** approach, prioritizing user experience, visual consistency, and accessibility. I also have experience in **responsive design and modern** web technologies (HTML, CSS, JavaScript). I have a particular interest in **network and system** technologies, with both theoretical and practical work on the OSI model, TCP/IP protocols, DHCP, DNS, and NAT. I enjoy optimizing, configuring, and maintaining systems for sustainable performance. I have hands-on experience with Wireshark for packet analysis and traffic monitoring, and I have built virtual network topologies in **Cisco Packet Tracer**, implementing routing, VLANs, and access control. I also created a virtual lab environment using VMware. On Linux systems, I am proficient in terminal-based administration, service management, and basic network configuration. Understanding, analyzing, and optimizing system and network infrastructures is both a technical passion and a continuous area of growth for me.

✉ emrecankorpınar7@gmail.com

☎ + 905517124658

📍 Kepez,Antalya

<https://github.com/EmrecanKorpınar>

EDUCATION

Computer Engineering
Sivas Cumhuriyet
University/Faculty of Engineering

2021 - 2025

GPA:2.77

Highschool

Kepez Anadolu Highschool

2015 - 2019

Skills

- **JAVA (INTERMEDIATE)**
- **MYSQL (EXPERT)**
- **NODE.JS (EXPERT)**
- **BOOTSTRAP (BEGINNER)**
- **ANGULAR.JS (BEGINNER)**
- **JAVASCRIPT (EXPERT)**
- **Git/ GITHUB (EXPERT)**
- **LINUX/BASH(INTERMEDIATE)**
- **PYHTON (INTERMEDIATE)**
- **DOCKER (BEGINNER)**
- **REACT js (EXPERT)**
- **EXPRESS:JS (EXPERT)**
- **TAILWINDCSS (INTERMEDIATE)**

CONCLUSION

Three different games were developed using Java Graphics2D: Flappy Bird, Tetris, and MathGamesForChildren. The game loop, scene and object management, animation, and sound integration were successfully implemented. Advanced experience was gained in graphic rendering and building interactive structures

Successfully integrated real-time file uploading, server-side processing, and PDF generation. Ensured secure user data and file management with Firebase. Gained practical experience in backend service integration, file handling, and cloud-based application development.

Developed a local ZIP compressor in Java using the Huffman compression algorithm. Achieved reduced file sizes and gained hands-on experience in algorithm implementation and bit-level data processing.

Successfully integrated real-time image processing and object recognition algorithms. Developed a basic traffic analysis system by classifying vehicle types with YOLOv8. Gained advanced experience in image processing, model training, and data interpretation.

Recreated YouTube's interface as a static web page using HTML and CSS. Improved skills in visual hierarchy and layout design through Grid and Flexbox techniques, while adopting UI/UX principles for a clean and user-friendly page structure.

Practiced modern web interface design and user interaction by successfully replicating a social media interface. Applied responsive design, component-based structure, and core JavaScript dynamics, building a strong foundation in frontend architecture and user experience (UX).

Booted a simple bare-bones operating system with my own bootloader, kernel, and configuration files, and tested it in virtual environments such as QEMU and VMware. This project provided hands-on experience in direct hardware interaction, computer architectures, file systems, and memory management. It also improved my debugging skills and helped me build foundational knowledge of compilers and programming languages.

PROJECTS

Game Development with Java (Graphics2D) 2023

Flappy Bird was coded and developed from scratch. The Tetris game (based on Zetcode.com) was enhanced with animations, sound, and improvements. MathGamesForChildren is a 2D fruit-collecting game, which required complex scene, object, and event management.

PNG to PDF Converter Web Application (Node.js & Firebase) – 2024

A web-based project where the interface was styled with HTML/CSS, the server side was developed in Node.js, and Firebase was used for cloud storage. The application enabled users to convert PNG images into PDF files efficiently

Java ZIP Compressor (Local Application) – 2024

Developed a program that compresses files specified by their file path using the Huffman compression algorithm, converts them into .zip format, and generates a new compressed file.

Vehicle Counting and Classification (Python, YOLOv8) – 2024

Performed data processing with NumPy and Pandas, and implemented a YOLOv8-based computer vision model to detect, classify, and count vehicles in real time from video streams.

Static YouTube Page (HTML, CSS) – 2024

I designed a static interface based on YouTube's homepage using HTML and CSS. The project focused on responsive layout and visual hierarchy, ensuring a clean and user-friendly design

Instagram Clone (HTML, CSS, JavaScript) – 2025

Developed a dynamic, interactive Instagram-like interface using modern web technologies. Simulated core social media features such as post sharing, likes, and comments at the front-end level.

Mini Operating System (C/C++, Assembly x86) – 2025

Developed a mini operating system running on the x86 architecture, featuring a custom bootloader and a C-based kernel. The kernel supports user mode switching, system calls, and module management. Implemented a shell application for interpreting user commands and a GUI module that renders windows via the framebuffer. A modular build system was set up using Makefile

CONCLUSION

Built a Single Page Application (SPA) with React Router and managed cart and session state using the Context API. Integrated Firebase for cloud-based product and user data management. Designed a responsive UI with Tailwind CSS. Leveraged Vite for a fast development environment and Hot Module Replacement (HMR).

Reduced data entry time significantly by implementing Excel import functionality. Ensured strong session and password security with JWT and salted hashing. Improved session management and data access speed using Redis. Designed a mobile-friendly, minimalist UI with Tailwind CSS. Built a scalable and maintainable system based on the PERN stack (PostgreSQL, Express, React, Node.js).

Designed and tested an end-to-end network topology in Cisco Packet Tracer with IPv4, VLANs, DHCP, and static routing. Gained practical experience in network protocols, IP configuration, and troubleshooting.

LANGUAGE

English (Fluent)
Turkish (Native)

References

Umut ÖNCEL

IT Specialist Supervisor, Kepez Municipality
[Mail:info@kepez-bld.gov.tr](mailto:info@kepez-bld.gov.tr)
0542 612 64 17

Prof.Dr. Hidayet TAKÇI

Head of Computer Engineering Department, Sivas Cumhuriyet University
[Mail:htakci@cumhuriyet.edu.tr](mailto:htakci@cumhuriyet.edu.tr)

Certificates

Certificate Name: ISO 9001:2015 Quality Management System
Issuing Organization: Sigmacert
Date of Issue: 17.04.2025

Certificate Name: Huawei Cloud Tech Essentials
Issuing Organization: :Huawei Cloud Developer Relations Team
Date of Issue: 17.10.2025

Certificate Name: Cloud Computing Fundamentals
Issuing Organization: :IBM
Date of Issue:28.12.2025

E-Commerce Website (React + Vite) – 2025

Developed a modern e-commerce platform delivering a fast and seamless user experience. Set up a rapid development environment with Vite and implemented a React component-based architecture to build core features such as product listing, filtering, user sessions, and cart management.

Animal Shelter Web Application – 2025

Built a Single Page Application (SPA) with React and developed API services using Express and Node.js. Managed data with PostgreSQL and enhanced session/cache performance with Redis. Implemented secure authentication using JWT and bcrypt for salted password hashing. Added a feature for bulk data import via Excel files. Designed a responsive and unique UI with Tailwind CSS.

Virtual Network Design – Cisco Packet Tracer (2025)

Designed and simulated a small-scale enterprise network using Cisco Packet Tracer. Configured routers, switches, and client devices with IP addressing, VLAN segmentation, DHCP, and static routing. Tested inter-device communication based on the OSI model. Built both physical and logical topologies to ensure access control and network isolation. Performed manual IP configuration for each device and verified connectivity.

Experience

July 2024 – August 2024
IT Specialist
Kepez Municipality

Gained experience in IT regulations within a public institution. Observed database systems, administrators, and authorization processes, along with related challenges. Acquired practical knowledge of how an IT ecosystem operates, is maintained, and kept sustainable within the Information Technology department. Observed and contributed to projects addressing real-world problems with practical solutions. Had the opportunity to develop projects using popular and widely adopted technologies such as JavaScript, MySQL, and Bootstrap.

September 2025 – October 2025
Web Developer
Antalya Metropolitan Municipality

Gained experience in the sustainability of internal digital systems and in developing user-focused solutions during the internship. Contributed to projects addressing real-world needs by building applications with JavaScript, React, Node.js, PostgreSQL, and TailwindCSS. Integrated front-end and back-end processes, gaining practical knowledge in data management, UI design, and system operations.