BURAK YILDIZ

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EDUCATION

Middle East Technical University (METU), Bachelor of Computer Engineering 2019 – 2025
Relevant Elective Courses: Game Development Pipeline (graduate-level), Game Metrics (graduate-level), Object-Oriented Programming, Software Construction

TECHNICAL SKILLS

Programming Languages	C++, C#, Java, Python
Game Development	Unity (2D/3D), Physics, UI Systems
Backend & Live Systems	Firebase, REST APIs, Real-time Data Synchronization
Tools	Git/GitHub, Blender (basic)

EXPERIENCE

AI/ML Researcher Jun 2025 – Sep 2025
METU DTX *Ankara, Turkey*

- Extended the Real-Time Location System (RTLS) project using ESP32 microcontrollers and ML techniques for indoor positioning accuracy.
- Migrated the system backend to Google Firebase, leveraging Realtime Database for scalable synchronization.
- Collaborated with faculty on applied ML/IoT research, delivering technical reports and performance evaluations.

Software Engineer Intern Jun 2024 – Aug 2024
Intertech *Istanbul, Turkey*

- Developed an AI-driven personal-finance chatbot by integrating Microsoft Azure OpenAI and Cognitive Search services.
- Built a responsive React + TypeScript web application for end-user interaction with the chatbot.
- Deployed and tested containerized microservices using Kubernetes.

PROJECTS

Elemental Planets — 3D RPG Game (Unity, C#). Developed as a term project for the graduate-level *Game Development Pipeline* course. Implemented core RPG systems including elemental-based combat mechanics, quest progression, inventory management, and character interactions. Designed and integrated 3D environments and gameplay logic with a focus on extensibility and performance. GitHub Repository

Tetris3D — 3D Tetris Game Engine (C++, OpenGL). Built a fully interactive 3D Tetris game engine from scratch using modern OpenGL. Implemented custom rendering pipeline, real-time camera controls, collision detection, input handling, and core game loop logic. Focused on performance optimization and clean engine architecture. GitHub Repository

Multiplayer Uno — Online Card Game (Java, JavaFX, Spring Boot). Designed and implemented a multiplayer Uno game as a term project for the *Software Construction* course. Developed a JavaFX-based client and a Spring Boot backend supporting real-time lobby management, turn-based game logic, and user authentication. Frontend / Backend