
EDUCATION

The University of Southern California**August 2023 - May 2025**

MSc in Computer Science - Scientists and Engineers. GPA: 3.73/4.0

Los Angeles, USA**Koc University****September 2017 - June 2023**

B.S. in Electrical and Electronics Engineering, coursework in Artificial Intelligence Track GPA: 3.59/4.0

Istanbul, Türkiye

B.A. in Media & Visual Arts(Double Major)

RESEARCH EXPERIENCE & PROJECTS

USC Institute for Creative Technologies - Age of AI & The Seventh Patient**Los Angeles, USA****Prof. Ning Wang****May 2024 - Present**

- Contributing to the development of pedagogical AI games designed to teach AI concepts and algorithms to K-12 students. Joined as a summer intern and later advanced to a student researcher and lead developer.
- Working across programming, UI/UX design, environment development, story and dialogue writing, and refining the educational aspects to enhance the game's engagement.

Interactive Media & Games Division Thesis project - Prism of You**Los Angeles, USA****Prof. Marientina Gotsis****May 2024 - October 2024**

- Volunteered as a Unity developer on a mobile game designed to help users engage with their emotions and learn coping strategies through gamification.
- Developed core game mechanics and various systems that form the foundation of the game's functionality.

USC Locomotor Control Lab - Worldplay VR**Los Angeles, USA****Prof. James Finley****September 2023 - May 2024**

- Worked on a VR game to help individuals with Parkinson's Disease (PD) practice essential skills such as turning, obstacle avoidance, and problem-solving during over-ground walking in a game-based environment.
- Added functionality to collect virtual data from patients' hand and head movements for further analysis, helping to detect specific movements that are challenging for them.

USC Game Innovation Lab - Asterist**Los Angeles, USA****Sean Bouchard and Martzi Campos****September 2023 - May 2024**

- Participated as a lead engineer of an augmented reality (AR) app that tracks stars and allows users to connect them to create personalized constellations, with features like adding stories, pictures, and voice recordings in a diary-like format.
- Took on a range of responsibilities from design to programming, with a primary focus on AR development in Unity.
- Received funding from **The Alfred P. Sloan Foundation Games Production Grant** and showcased at the **USC Games Expo**.

Koc University Hospital - BreatheVR**Istanbul, Türkiye****Prof. Remziye Semerci and Prof. Hakan Ürey****September 2022 - June 2023**

- Designed and implemented a VR application with a biofeedback mechanism to reduce pain and anxiety during port needle insertion for cancer treatment.
- Engineered a wearable device using an ADXL acceleration sensor to track inhale-exhale patterns from chest movements, which served as a game controller. Developed an algorithm to estimate breathing patterns and reinforce deep, slow breathing.
- Collaborated on test studies and data collection from real patients, contributing to the publication of an article in the **Seminars in Oncology Nursing journal**, analyzing the effectiveness of VR for pain relief and distraction during cancer treatment.
- Selected as a finalist and presented at **TUBITAK (The Scientific and Technological Research Council of Turkey)"Technology for Humanity" competition**, also awarded second place by the engineering faculty for the **Best Senior Design competition**.

Koc University KARMA Lab - Encanto Pedal**Istanbul, Türkiye****Prof. Asim Evren Yantac****February 2023 - May 2023**

- Created a game to encourage physical activity in children undergoing chemotherapy by integrating hand movements and cycling into gameplay.
- Designed and developed the entire system, including character sketching, rigging, animation, hardware, and software development. Made the system modular for adaptability to different age groups by modifying the story.
- Hand movement data was captured using a Microsoft Kinect sensor while cycling data was gathered through a custom cadence sensor-like system developed using ultrasonic sensors.
- The project was implemented and used with actual pediatric cancer patients at **Koc Hospital** to aid in their physical therapy.

Koc University KARMA Lab - My Hospital Buddy IDA**Istanbul, Türkiye****Prof. Asim Evren Yantac****September 2020 - June 2022**

- Developed and maintained software for the AR-based application "My Hospital Buddy IDA," which features a virtual character that engages children undergoing mental therapy through a booklet containing image triggers.
- Collaborated with psychologists, designers, and artists to enhance the app's appeal and engagement for children.
- This project secured funding by winning the **Abdi İbrahim "We Heal The Future" competition** in 2021.

Koc University KARMA Lab - Kitchen VR

Prof. Asım Evren Yantac

Istanbul, Türkiye

September 2020 - September 2021

- Worked as a VR developer on a team to create a VR kitchen environment for the well-known white goods manufacturing company **Arcelik** using Unity, SteamVR, and HTC Vive.
- Developed a VR application that simulated a virtual kitchen environment to understand customer interactions with kitchen utilities and included multi-user capabilities for engineers to collaboratively design machines.

Koc University Arçelik Research Center for Creative Industries (KUAR)

Prof. Ozge Subasi

Istanbul, Türkiye

September 2019 - January 2020

- Worked on improving campus accessibility to ensure equal educational opportunities for students with disabilities.
- Curated and edited HCI research articles on accessibility for the Craft-Computing website.

EXHIBITIONS

"Catch the Trickster" Exhibition - Abdülmecid Efendi Museum

Istanbul, Türkiye

- Designed and developed a harp-like digital instrument that produced melodies and generated visuals in real-time through hand movements, utilizing sensors and TouchDesigner.
- The exhibition aimed to tell stories from Greek mythology, and my artwork depicted Orpheus gently playing the lyre.

"Ortak Mekik" Exhibition - Tophane-i Amire Art Center

Istanbul, Türkiye

- Developed a procedural music generation device for transforming traditional carpet weaving movements into a digital instrument using free-hand motions
- This exhibition explored how cultural heritage and traditional Turkish practices, such as carpet weaving, relate to technology. My art piece was performed by a master carpet weaver during the opening and closing ceremonies.

WORK EXPERIENCE

NSocial

Istanbul, Türkiye

Part-Time Virtual Reality Developer

March 2022 – September 2022

- Developed VR experiences for occupational safety simulations and games designed to promote physical activity in children.
- Integrated backend systems with Unity to enable features such as user authentication, data storage, and multi-player features.

ASELSAN(Turkish Defense Company)

Ankara, Türkiye

FPGA Developer Intern

June 2021 – August 2021

- Implemented various communication protocols, including UART and I2C using an FPGA board and VHDL.
- Gained an in-depth understanding of electronic card design.

ART Labs - Diner

Istanbul, Türkiye

Mobile Application Developer Intern

June 2020 – August 2020

- Contributed to the development of an application for creating AR restaurant menus, utilizing AR Foundation and Unity.
- Used photogrammetry techniques for the preparation of AR-ready models.

SCHOLARSHIPS & FELLOWSHIPS

- **Fulbright Scholarship**(2 yr, 2023 - 2025, \$50,000 per year)
- **Promising Turks Grant from The American Turkish Society**(1 yr, 2024 - 2025, \$10,000)
- **Keith Uncapher Scholarship from University of Southern California**(2 yr, 2023 - 2025, 12 credit units)
- **Anatolian Scholarship from Koc University**(6 yr, 2017 - 2023, \$35,000 per year)
- **Vehbi Koc Honor Award**, 2019 - 2023 for having an SPA above 3.5

PUBLICATIONS & CONFERENCE PAPERS

- Savas, E. H., Semerci, R., Sayin, A., **Dincer, B.**, Semiz, B., & Urey, H. (2023). A Biofeedback Based Virtual Reality Game for Pediatric Population (BioVirtualPed): A Feasibility Trial. *Seminars in Oncology Nursing*, 34(Supplement 2), S1226.
<https://doi.org/10.1016/j.soncn.2024.151615>
- Wang, N., Merchant C., Fu B., **Dincer, B.**, & Masur, O. Becoming Fei: An Educational Game for AI and Data Science Education for Novice Learners. Abstract accepted at the **HCI International Conference 2025**.

VOLUNTEERING & ACTIVITIES

USC Viterbi School of Engineering

Los Angeles, USA

Graduate Student Ambassador

January 2024 – May 2024

- Represented the department at various campus events, engaging with prospective and newly admitted students.
- Provided support and guidance to applicants through in-person and online conversations.

Koc University Dean of Students

Istanbul, Türkiye

Student Mentor

September 2021 – June 2023

- Offered support and took on a leadership position in mentoring a cohort of first-year students.
- Guided students through their academic transition and provided advice on courses, campus resources, and personal development.

Koc University Student Council

Istanbul, Türkiye

Representative of Engineering Department

September 2020 – August 2022

- Pioneered the revitalization efforts for the student council and was elected as the student representative of the engineering faculty.
- Organized multiple academic events and improved communication between students and administration, with a special focus on supporting queer female engineers.