

KAAN ÜNLÜ

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in <https://www.linkedin.com/in/kaan-unlu-the-designer/>

portfolio: <https://sites.google.com/view/kaans-grand-library/>

Education

Aalto University, Helsinki, Finland

M.Sc. In Computer Engineering, Game Design and Production

2020 – 2022

3.81/5.00

Bilkent University, Ankara, Turkey

B.Sc. in Computer Science

2016 – 2020

3.13/4.00

Kingston University, London, UK

Exchange/Erasmus Student in Computer Science

2018

4.00/4.00

Work Experience

Başkent University, Ankara, Turkey

Reinforcement Learning Researcher, PhD Candidate, Teaching Assistant

- Working on planning, teaching, grading and proctoring for university students full time
- Designed a “Game Design and Production” course to be taken jointly by the Computer Engineering and Graphic Design departments, with separate and joint classes and a joint group project to reinforce interdisciplinary cooperation

2025-

TRT (Turkish Radio and Television Corporation)

Commissioned Level Designer

- Designed over 40 levels for a game show, “Kilit Noktası” (Lock Point) consisting of puzzles to be solved cooperatively by 3 high school students at the same time
- The puzzles were scientifically themed and based, physically active and designed for 3 people to cooperate on at the same time

2025

Bilkent University, Ankara, Turkey

Reinforcement Learning Researcher, PhD Candidate under Özgür Ögüz, Teaching Assistant

- Worked on a Sayem Tübitak project initiative held between multiple universities and tech companies, aiming to achieve water and nutrient efficient agriculture of crops with RL assisted tracking of plot needs using Satellite imagery, plot dirt content data through sensors and farmers’ data on crop content
- Did Teaching Assistant work as advisor on Project Management and Object Oriented Software Development subjects and as a laboratory TA for Python Development
- Worked on prototyping and testing contemporary Deep RL algorithms in Python to perform preset goals especially in closed, pre-explored maps in collaboration among themselves and humans, and with minimum generational preloading (eventually aiming to reach a “You-Only-Live_Once” kind of paradigm, where agents don’t get chances to repeat learning scenarios, and rather have to do knowledge transfer in between tasks as they progress)

2023-2024

ABRA Education, Helsinki, Finland

IO2 Project Manager/Producer

- Worked on EU-funded project doing transdisciplinary education between Science and the Arts in the form of international workshops trying to establish a joint masters programme
- Scoped, managed and reinforced regular team responsibilities and physical events and workshops in Finland and Denmark through custom company portal and privately through Trello

2022

TaleWorlds Entertainment, Ankara, Turkey

Intern in Campaign and Tools Development

- Worked with C# and XML in custom engine to fix older bugs and build tools to help in development of the economy system in Mount and Blade II: Bannerlord
- Worked with Jira and Plastic SCM in Agile in weeklong sprints to coordinate and streamline teamwork
- Participated in department lead meetings to get acquainted with initial feature design processes as well as feedback on present mechanics

2019

SimBT Simülasyon Bilim ve Teknolojileri, Ankara, Turkey

Intern in Augmented Reality Development

- Worked with C# in Unity Engine to design and develop heads-up display style UI for mobile AR glasses
- Did QA/Testing for Unity based VR environments

2018

Research Experience

Hacettepe University, Ankara, Turkey

Game Design and Reinforcement Learning Researcher, PhD Candidate under Ufuk Çelican

- Researching “context switching” in an effort to better ascertain needs for separate brains for different contexts in reinforcement learning scenarios such as micro and macro strategisation in RTS games

2025-

Aalto University, Helsinki, Finland

Reinforcement Learning Research Assistant under Perttu Hamalainen

- Benchmarked Deep RL methods through MuJoCo to build generic navigation agents
- Experimented on player enthusiasm and attention in response to varying levels of scholasticism in success-determining mechanics in Turn Based Tactics games using in-depth thematic analysis of 14 test subjects

2020 – 2021

Research Assistant in Serious Games and Software Development under Eray Tüzün

- Co-developed a serious game on teaching Code Review in Java, using HTML and CSS for the front-end and Javascript for the back-end
- Tested the effectiveness of the game components with a case study of 132 students of 2 software engineering courses, and compared them to a test done in the same format for a previous, non-gamified version of the software

Publications

- K. Ünlü, "Is there a threshold in blood glucose in which once below it, the rate of decline of blood glucose increases?," *Extended Essay, International Baccalaureate Diploma Programme*, 2016. [Online]. Available: https://www.academia.edu/79828879/Research_Question_Is_there_a_threshold_in_blood_glucose_inwhich_once_below_it_the_rate_of_decline_of_blood_glucoseincreases?uc-sb-sw=98510867
- K. Ünlü, B. Arđıç, and E. Tüzün, "CRSG: A serious game for teaching code review," *ESEC/FSE 2020*, pp. 1561–1565, Nov. 2020, doi: 10.1145/3368089.3417932.
- K. Ünlü, "Determinism versus stochasticity in the action economy of Turn-Based Tactics Games," *MSc. Thesis, Aalto University*, 2023. [Online]. Available: <https://aaltodoc.aalto.fi/items/64c932f8-f05e-4263-9aa9-a1b3b4b320f6>

Reviewer Duties

- NeurIPS 2023, 2024
- CoRL 2023, 2024

Computer Skills

- **Programming:** C#, Python, Java, C++
- **Machine Learning Frameworks:** PyTorch, Tensorflow, Keras, Scikit-learn, MuJoCo, Gymnasium
- **Software:** Unreal Engine, Godot, Unity, Blender, Maya, Photoshop, Illustrator, Plastic SCM, Git, Jira, Confluence, Trello

Languages

- **Native/Bilingual:** Turkish, English
- **Limited Working Proficiency:** Finnish, Italian, German

Honors and Awards

Bit1 Second Place Award	2021
<ul style="list-style-type: none"> • Our team won 2nd place award at the national indie game development tournament Bit1 in 2021 with our game project, Fhaesir's Pride 	
Best Senior Design Project Award	2020
<ul style="list-style-type: none"> • Our Senior Design Project "Guido" won the "Best Senior Design Project Award" with the sponsorship of OBSS during CSfair 2020 in Bilkent 	
Masters Full Scholarship	2020
<ul style="list-style-type: none"> • Full Scholarship to study a masters programme of science at Aalto University, Game Design and Production 	

Volunteer Activities

Games Now! Production Team	2020 – 2021
<ul style="list-style-type: none"> • I worked with Chloe B. Kim under Annakaisa Kultima in the Games Now! Production Team as a graphic artist and producer to build a consistent image for the brand, as well create poster, sticker and interface visuals for events. 	
The Global Game Jam	2020
<ul style="list-style-type: none"> • Coordinated the event with the president of Bilkent Game Developers Society in Bilkent Cyberpark with partnership from Taleworlds and Mozart Café. 	

Major Projects

<u>Cantata</u>	2022-
<ul style="list-style-type: none"> • Cantata is a highly modular Bronzepunk dark fantasy TTRPG (Tabletop Role Playing Game), built to work and play like an immersive sim the likes of Deus Ex, Fallout New Vegas, Thief, etc and running on a framework of 2d10 rolls and skill proficiencies. It is still in development, but a fully functional demo version is released on Reddit under CantataTTRPG. 	
<u>Marmortal</u>	2021-
<ul style="list-style-type: none"> • Marmortal is a First Person Shooter and Platformer game made in Unity that focuses on a plethora of platforming puzzles and high-speed combat with tight and satisfying controls. Starting from 2022, we have started working on a sequel for the game made in Unreal Engine. 	
<u>Words Left Unsaid</u>	2020 – 2021
<ul style="list-style-type: none"> • Words Left Unsaid is a noir mystery game made in Unity about a detective, an author, and a haunted hotel based around gathering clues of events that have happened in before and putting together the correct order in which they have happened. 	