

# Ijtihed Kilani

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## EDUCATION

### Aalto University

Major: Computational Engineering; Minors: *CS (Masters), ML and AI, & SWE*

Espoo, Finland

August 2024 – Present

## TECHNICAL SKILLS

**Languages:** Python, C#, Dart, HTML, CSS, JS

**Developer Tools:** Visual Studio, Unity, PyCharm, Git, LaTeX

## EXPERIENCE

### Research Assistant

Dec 2022 – May 2024

*King Abdulaziz University, Biotechnology & Computational Genomics*

*Jeddah, Saudi Arabia*

- Led the writing of 2 publications, performed literature reviews & managed journal responses for publications
- Analyzed & visualized 1,000+ patient genetic data using Python (pandas and statsmodel)
- Mentored 5 junior team members, taught them documentation & citation methods

### Student Researcher

Jul 2023 – Aug 2023

*23rd Summer Research School in Mathematics & Informatics, Computer Science & Applied Math*

- Led the writing & formatting of a published preprint (Under Dr. Stanislav Harizanov) that applied informatics concepts such as DP (Dynamic Programming), Graph Theory Approach, and Heuristic Search Approach to solve International Math Olympiad problems
- Delivered compelling presentations on the research findings to a diverse academic audience of 30+ academics, including multiple PhDs

## PROJECTS

### The Yappin' Spirit | C# (.NET), Unity, Python (OpenCV, DeepFace, Flask), Blender, HLSL, PhysX

- Implemented real-time emotion tracking in Unity using OpenCV and DeepFace, processed via a Flask server.
- Fetched emotion data within Unity from the server and used the "main emotion" to describe the player's emotion for the main game mechanic.
- Leveraged PhysX 3.4 for in-game physics and interaction fidelity, and Blender for Shaders and Game Sprites.

### Maze Maverick | C# (.NET), Unity, PhysX 3.4

- Published a 3D recreation of "Pacman" on Steam, featured on 10+ websites & achieved over 200 wishlists with earnings around \$100
- Released an update to address play tester feedback and bug fixes
- Experienced significant data loss during development, underscoring the importance of regular backups

### Classic Bounce | C# (.NET), Unity, PhysX 3.4

- Developed and published a modern version of the classic mobile game "Bounce" on Itch.io with updated physics and graphics.
- Collected player feedback and released multiple updates to improve user experience and fix bugs.
- Posted multiple updates and maintained a rating of 4.5+ stars on the platform after review.

## PUBLICATIONS

### Comparative Study of Complete Blood Count Between High-Altitude and Sea-Level Residents | Python, Excel

- Second author of a published study analyzing hematological differences due to altitude variations
- Led the writing, documentation, and publishing process, performed all the graphs and data analyses using Python and Excel

### Single Nucleotide Polymorphisms in HIF-1A, VEGFa, & VHL Genes | Python, Excel

- Second author of a review on genetic adaptations in high-altitude residents versus sea-level residents
- Led the writing, documentation, and publishing process
- Performed all the graphs and data analyses using Python and Excel