Ariya Bayat – GAME DEV, PROGRAMMER

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Personal Summary

Immersed in game development since the age of 10. Published my first mobile arcade game at the age of 14, and recently made a high-speed anime platformer. Worked in teams with other programmers through 13 game jams. I have always been curious of the technical side of games and how they solve problems through elegant solutions, and I am keen to take on new challenges.

TECHNICAL SKILLS

GENERAL:	C# (4y) – Unity (6y)
WEB DEV TOOLS:	JavaScript (3y) – HTML (1y) – CSS (1y) – WebGL (2y)
SOURCE CONTROL & BACK-END:	Git (3y) – Firebase (6m) – JSON (3m)
PRODUCTIVITY:	Notion (3m) – Trello (3y) – Word (4y) – PowerPoint (3y)
IDE:	Visual Studio (4y) – Android Studio (3m)
OTHERS:	Java (3m) – Python (6m)

Learn more about these projects on my portfolio: https://shadyleegamer.github.io/

WORK EXPERIENCE

Okainos *(Online multiplayer card game)*   AUG 2021 – OCT 2021

Recruited as lead developer by an artist I met in a game jam to help transition the game from alpha to closed beta,

- ✓ **Development & maintenance of back-end systems** – Integrated real-time database with over **25** accounts, multiple method authentication, web hosting and cloud storage to the game and website.
- ✓ **Reduced manual updates** – Developed update system of card changes (buffs, nerfs, tweaks) with card data assets.
- ✓ **Optimization of data process** – Automated the writing and reading of card data between the editor and database in JSON with Rest API through custom editor scripts.
- ✓ **Launched closed-beta testing campaign through web dev** – Built a website that attracted over **20** players resulting in valuable feedback and live testing:
  - Firebase-integrated authentication system linked to game database, enabling users to login via a single account.
  - Managed game access for beta testers to a **100** key group generated with Itch.io, stored in cloud storage.
  - Signed up to **13** accounts via mailing list, stored in real-time database.
- ✓ **Card deck builder (SerDes)** – Designed a code containing details of card decks which is imported and exported by the game.
- ✓ Other systems such as friends manager synced with account, team planner for filtering cards by properties (rarity, tribe, stats), and battle system.

PROJECTS

Edge Runner *(High-speed anime platformer)*   JUNE 2022 – PRESENT

Recently shipped a high-speed anime platformer game on Itch.io, featuring complex gravity-bending physics,

- ✓ **Spline-based character controller:**
  - Greatly optimized player movement by minimizing collision detections and replacing engine-physics with a custom physics

solution utilizing splines.

- **Consistent physics** – Stress tested against extreme movement speeds and very low frame rates.
- **Assist system** – Aids inputs to better achieve desired actions through input buffering, dash extension and environment snapping.

✓ **Reusing flexible systems** – Control lock system used to manage and prevent interruption of different special events.

✓ **Extensive use of splines** – Developed a custom extension for Unity's Sprite Shape API that breaks splines down to segments and points for full control and flexibility. Used for:

- **Suitable movement system** – Solved multiple problems of custom physics through elegant use of spline points.
- Aiding level design through real-time visualization of splines points, corner types and normals.

✓ **Dynamic camera** – Utilized Cinemachine to follow a target influenced by player movement and state to tweak the feel of each.

✓ **Profiler analysis** – Maintained performance of **283** changing transforms, reducing frame time impact from **45.7%** to **2.6%**.

Game Jams *(13)*
SEPT 2020 – MAY 2022

Worked with other programmers in teams on **13** game jams, including one ranked **15**th place out of **158** entries! **6** of them were exported to WebGL. Highlights of Systems developed:

▶ **Dungeon level generator** – Random level generation sequence inspired by Spelunky.

▶ **Object pooling** – Maintained performance of over **100** objects of different types present in a scene.

▶ **Combo system** – Featuring a basic attack and two different special attack combos with pc, mobile and controller support.

▶ **Isometric grid movement** – Displays movement tiles with collision detection for movable and immovable objects blocking path.

2020 Survival Game
APR 2020 – AUG 2020

Made and published a fun survival game on Google Play and PC during BTEC course over the quarantine about surviving a lockdown, collecting toilet papers, and shooting soap at the infected! Reported **80** unique user installs.

Tap Fever *(First published game)*
SEPT 2016 – JUL 2017

Submitted my first mobile arcade game to Google Play at the age of 14. The game features an endless gameplay loop with 4 different game modes for variety and 3 different skins for customization.

EDUCATION

Ark Walworth Academy
SEP 2019 – JUL 2021

(Distinction**) BTEC Level 3 National Extended Diploma in Information Technology

Relevant units included: Computer Games Development – Programming – Mobile .Apps Development – Website Development – Using Social Media in (Game Studio) Business

Hobbies: BJJ – Dancing – Music Production – Sculpting – Table Tennis – Anime