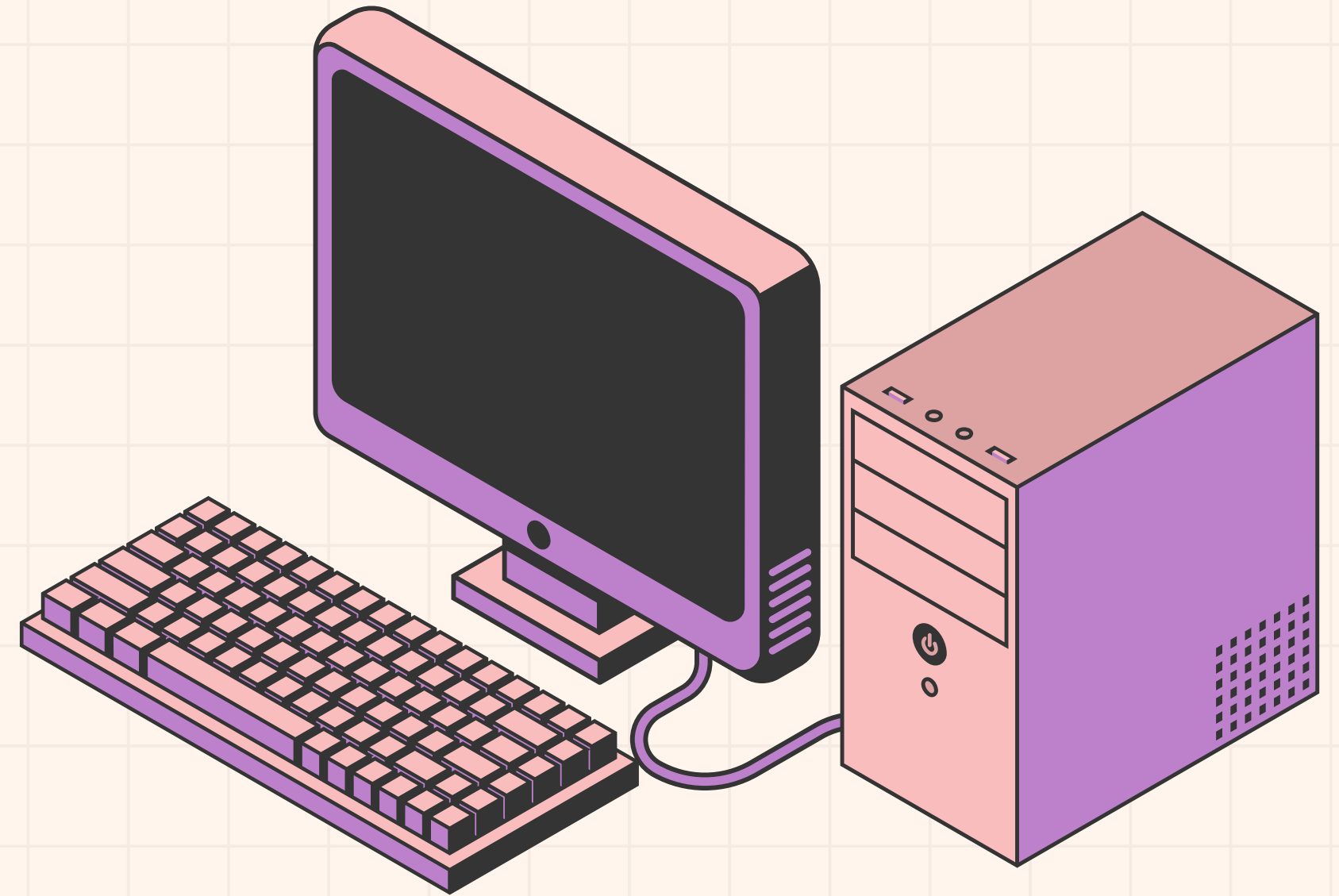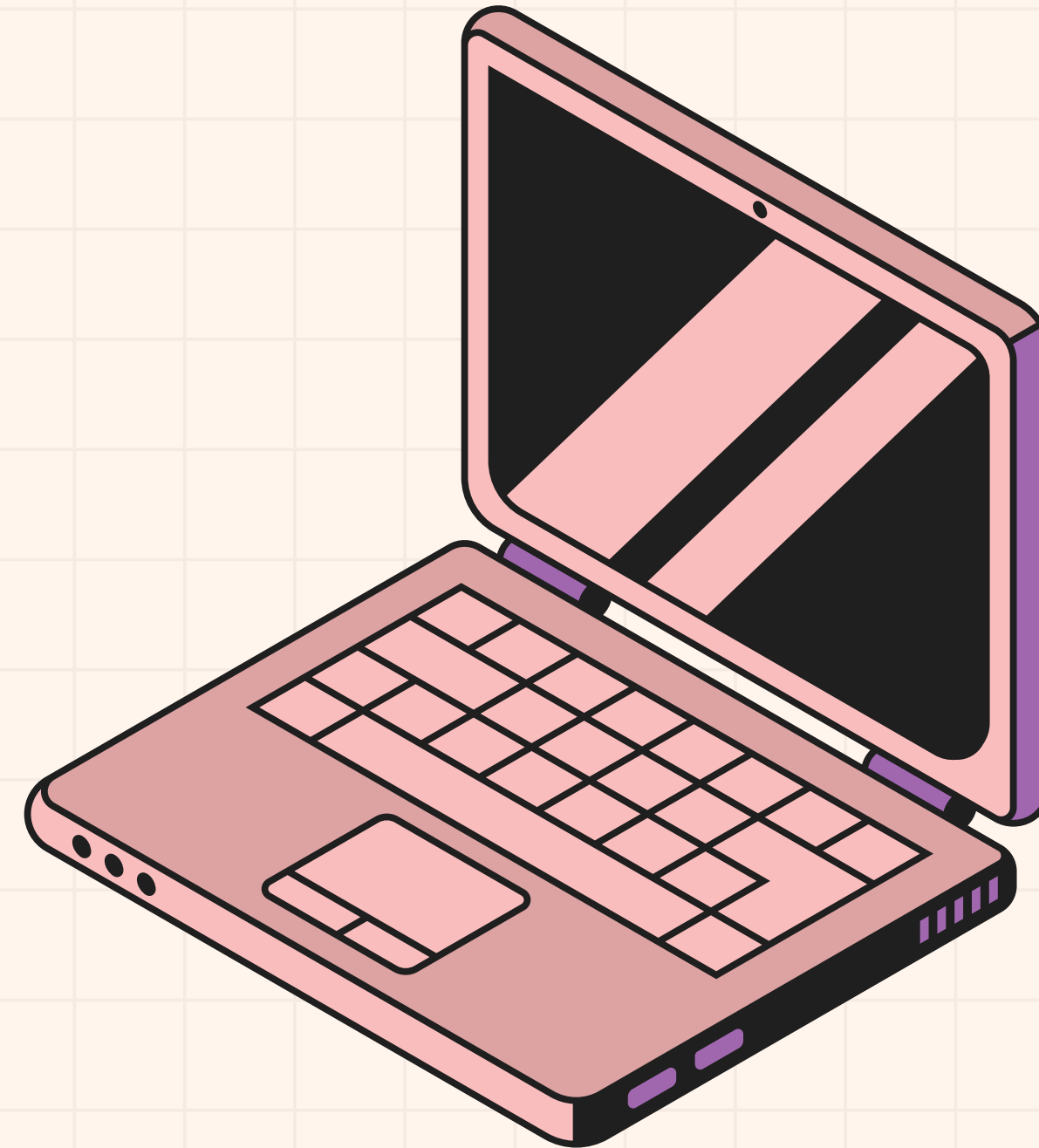# SERVER
MESHING

SECTIONS

- Introduction
- Need for Innovation
- Current Distributed Game Architecture
- What is Sever Meshing
- Use Cases in games
- Conclusion and Future Work
- Q&A

THE NEED FOR INNOVATION

- THERE ARE 3.26 BILLION PEOPLE WORLWIDE THAT PLAY GAMES [1]
- FROM THESE, THERE ARE 1.1 BILLION ONLINE GAMERS WORLD WIDE [1]
- MMOS MARKET SIZE IS 48.97 BILLION IN 2023 [2]

THE NEED FOR INNOVATION

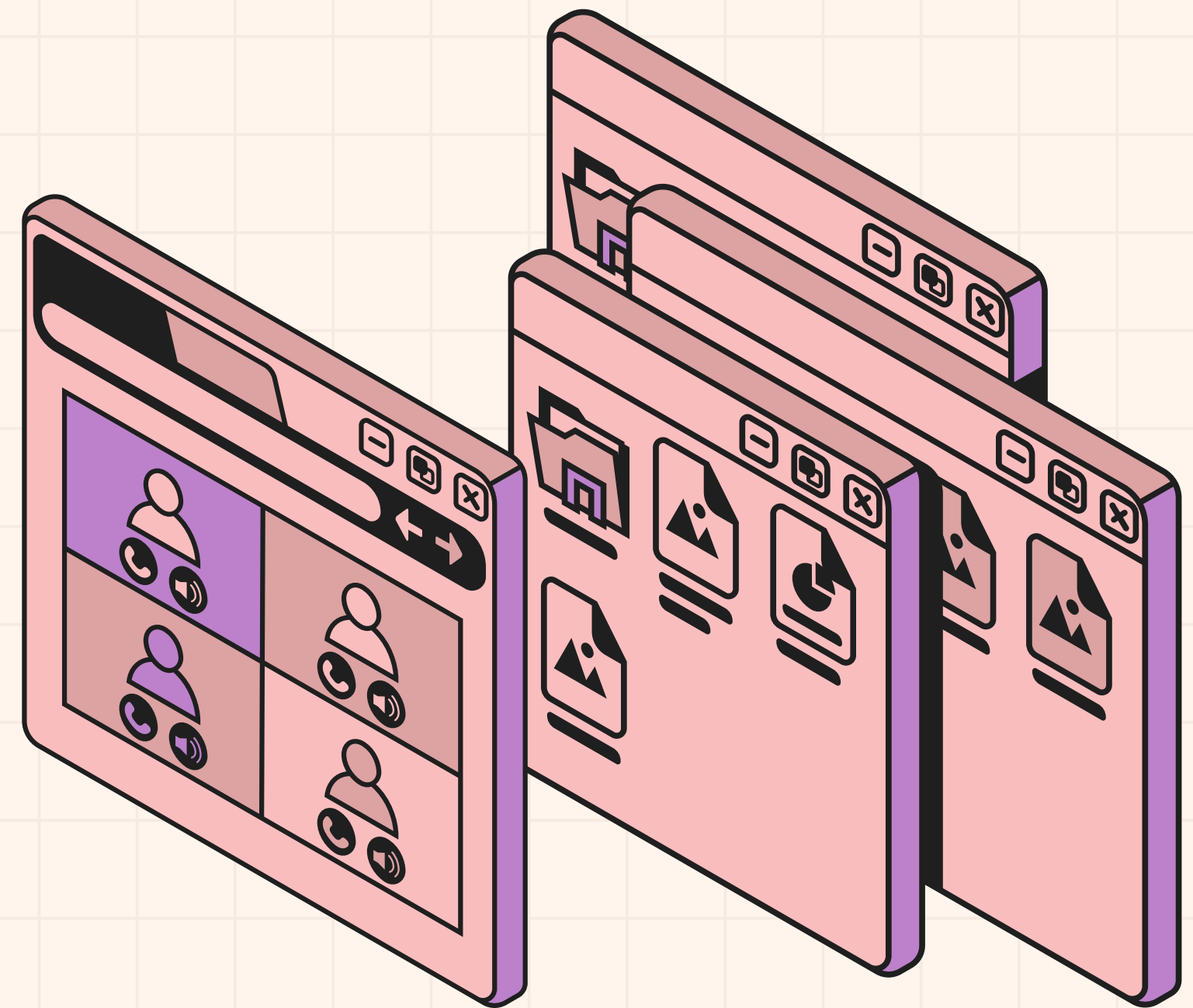- GROWING COMPLEXITY
- TECHNICAL CHALLENGES

SOLUTION

→

SERVER MESHING

Example

Example2

CURRENT DISTRIBUTED GAME ARCHITECTURE

- Limited
- Costly
- Game less immersive

WHAT IS SERVER MESHING

- STATIC SERVER MESH
  - PREDEFINED AREAS
  - DOES NOT ALLOW FOR DYNAMIC REALOCATION

- DYNAMIC SERVER MESH
  - GAME WORLD IS NOT DIVIDED INTO STATIC ZONES
  - SERVERS DYNAMICALLY ADJUST TO HANDLE MORE PLAYERS
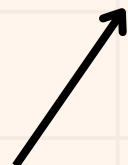
LOAD BALANCING

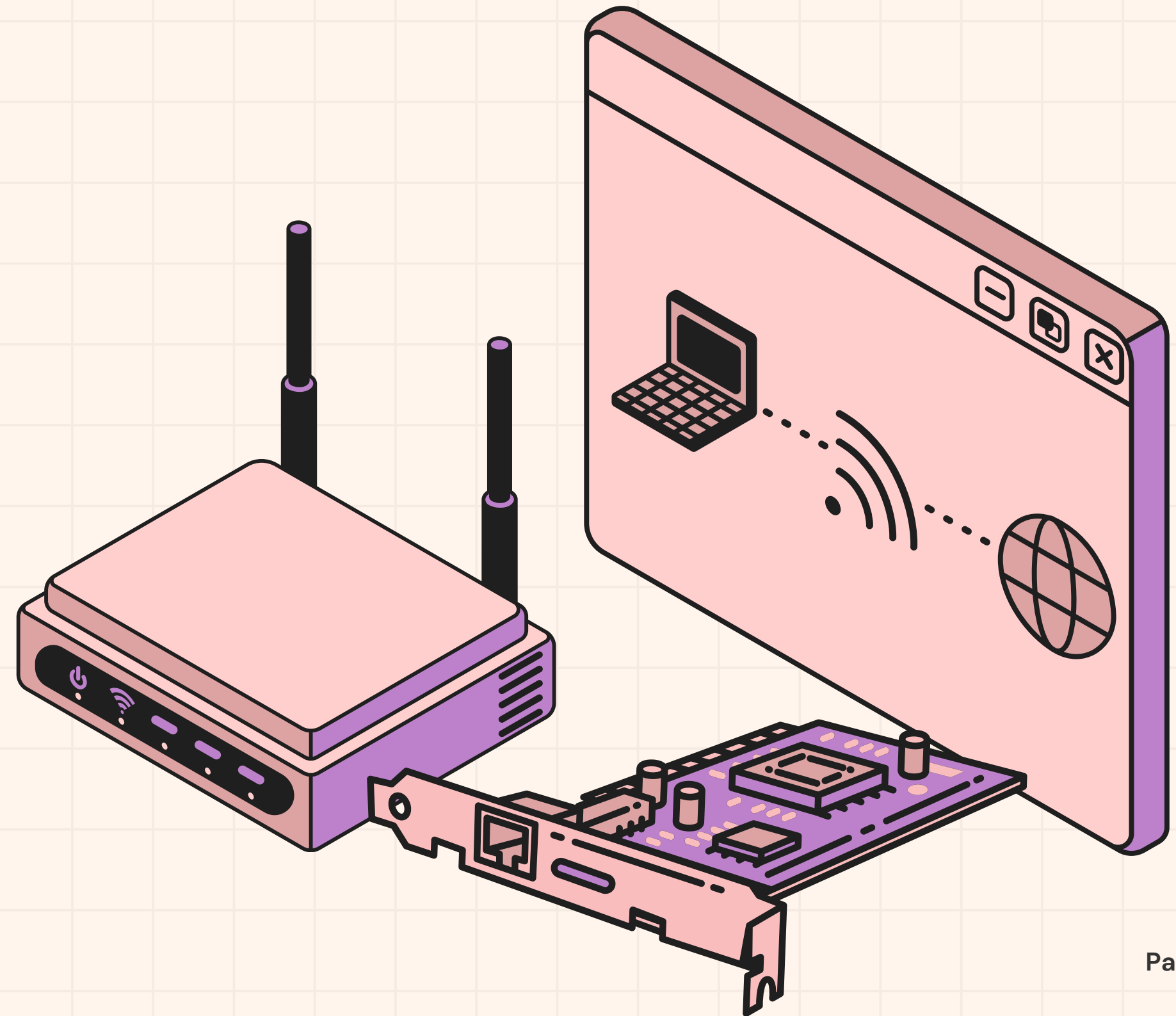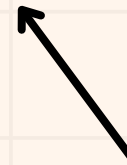- STATIC LOAD BALANCERS
- DYNAMIC LOAD BALANCERS

SERVER MESHING

SPECIALIZED MIDDLEWARE

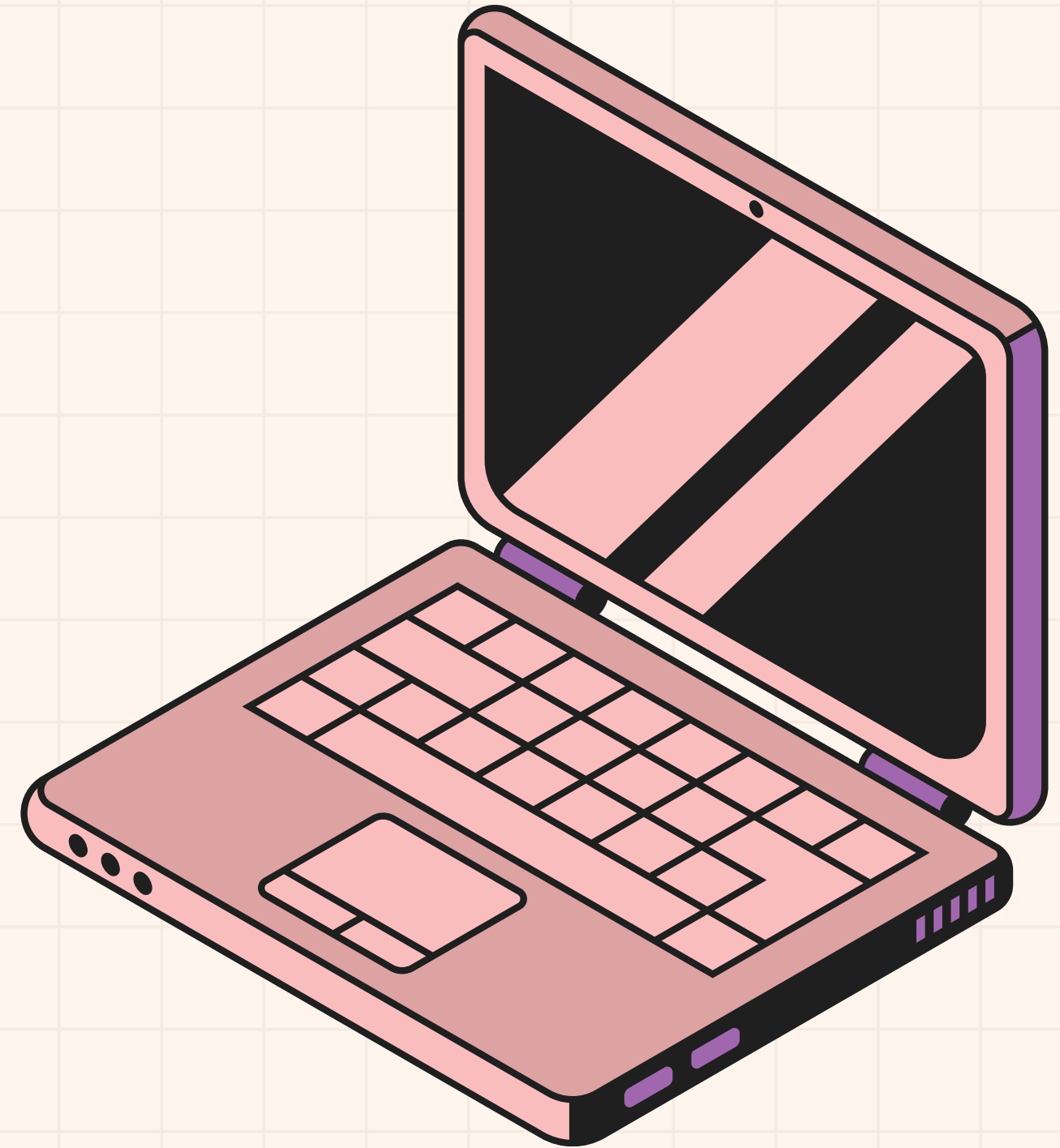MONITORING

USES CASES
OF SERVER MESHING

- Horizontal Scalability
- Seamless Player experience
- Reduced Bottlenecks
- Dynamic World Events
- Persistent Universe
- Large Connected Worlds
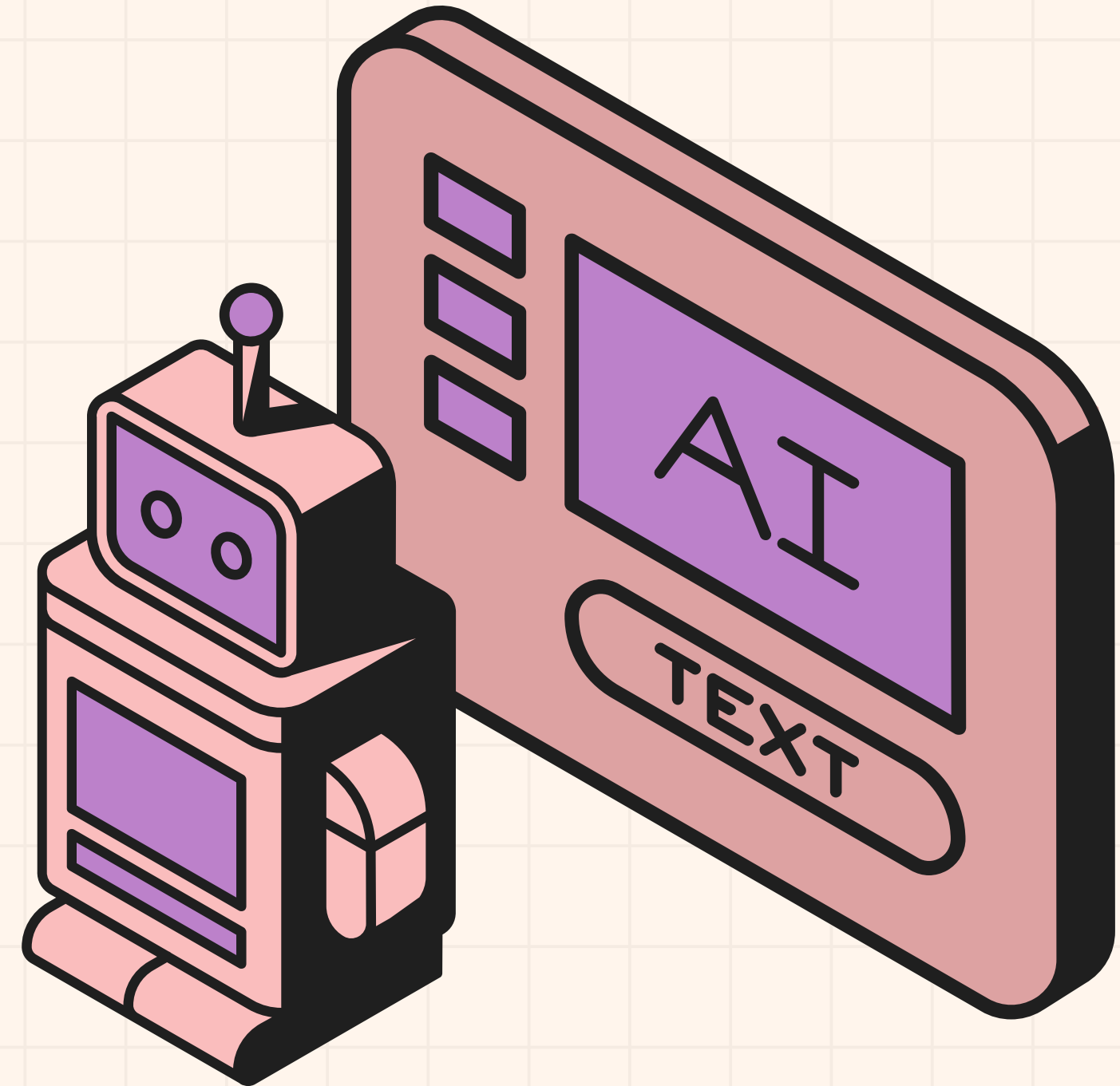
USES CASES
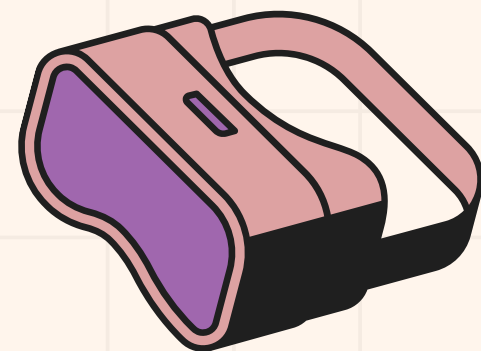## OF SERVER MESHING

Example of ashes of creation with combat
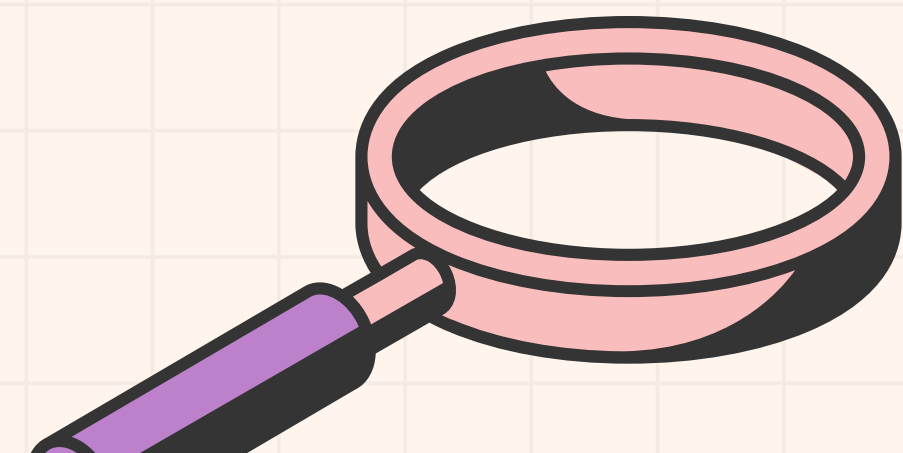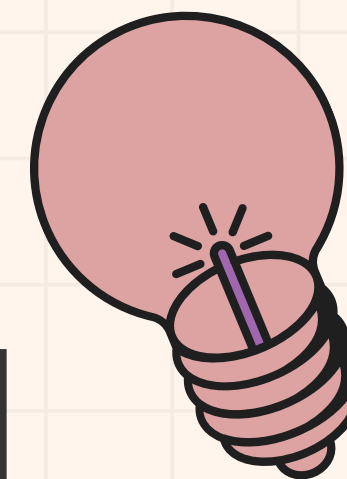
Example of ashes of creation with combat
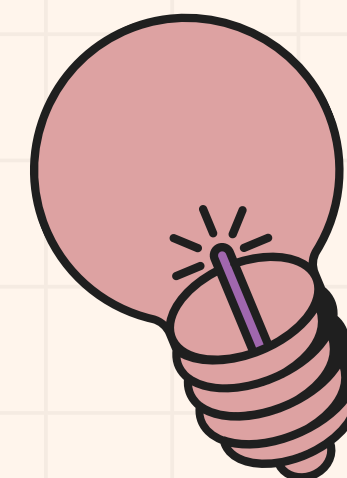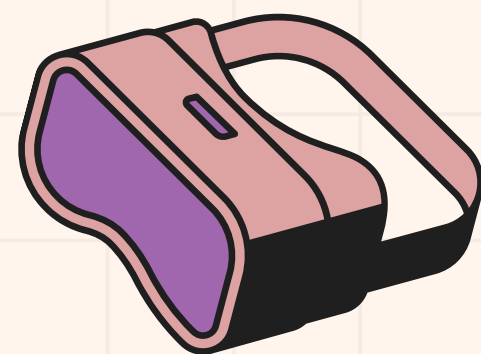
FUTURE
DEVELOPMENTS

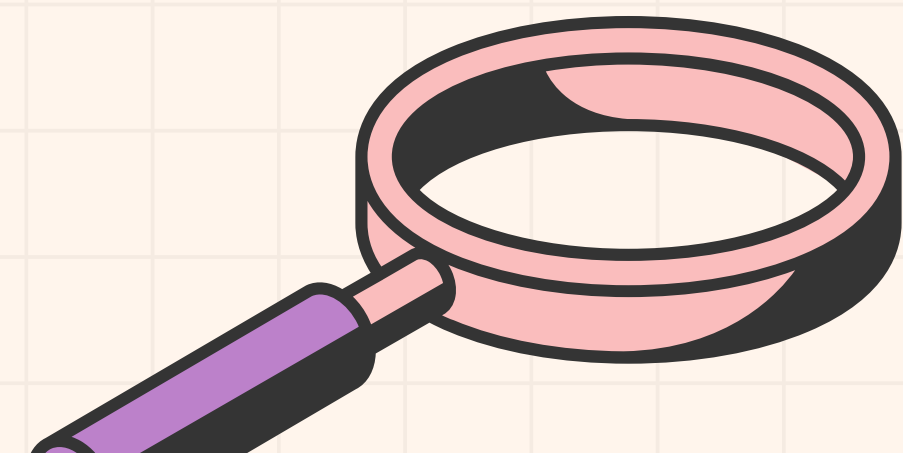- **Using AI to Predict and manage server load**
- **Dynamic Griding**

THANK YOU

Q&A

REFERENCES

- [1] Gaming Statistics 2024 – TrueList. (n.d.). Retrieved October 24, 2024, from https://truelist.co/blog/gaming-statistics/

- [2] Massive Multiplayer Online (MMO) Games Market [2032]. (n.d.). Retrieved October 24, 2024, from https://www.businessresearchinsights.com/market-reports/massive-multiplayer-online-mmo-games-market-102538

- [3] Server meshing – Ashes of Creation Wiki. (n.d.). Retrieved September 27, 2024, from https://pt.ashesofcreation.wiki/Server_meshing

- [4] Server meshing – Star Citizen Wiki. (n.d.). Retrieved September 28, 2024, from https://starcitizen.tools/Server_meshing

- [5] (42) Ashes of Creation Alpha Two Server Meshing Technology Preview – YouTube. (n.d.). Retrieved September 27, 2024, from https://www.youtube.com/watch?v=pdav0as54mU&t=360s

- [6] (25) CitizenCon 2951: Server Meshing & The State Of Persistence – YouTube. (n.d.). Retrieved September 25, 2024, from https://www.youtube.com/watch?v=TSzUWl4r2rU