



Understanding Containers
through Gaming

Brendan Fosberry

Senior Software Engineer
at Codeship

dockercon 16

20 mins slides

20 mins discussion



Agenda

Gaming

Learning
Minecraft
Problem Solving

Docker Than Light

Overview
The Docker Analogy
Simulation

Discussion

Q&A
Docker Than Light
Learning through
Gaming

Gaming

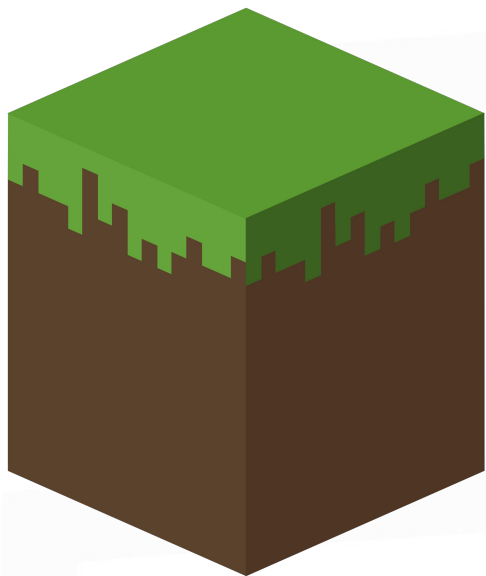
As a medium of discovery

“..I think, above all, I'm in awe at their power to motivate, to compel us, to transfix us, like really nothing else we've ever invented has quite done before. And I think that we can learn some pretty amazing things by looking at how we do this. And in particular, I think we can learn things about learning.”

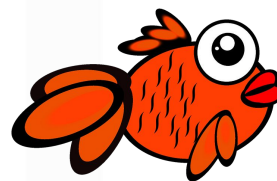
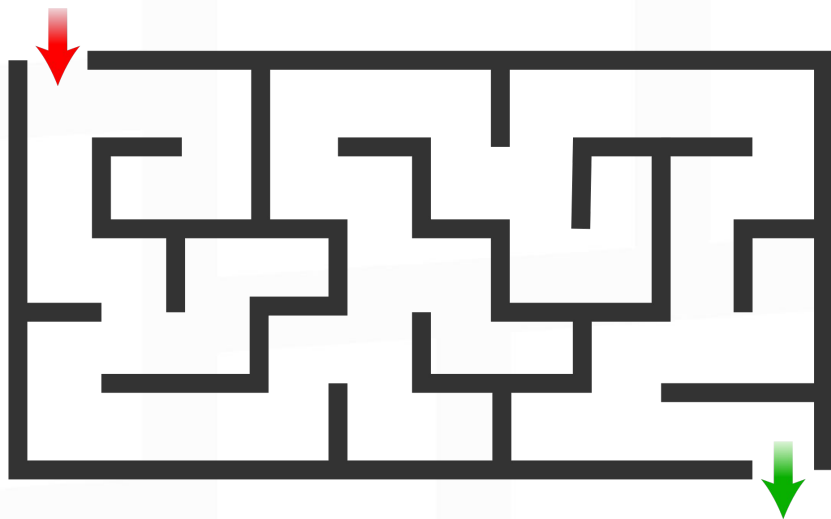
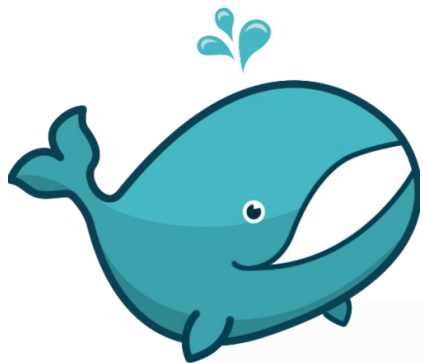
**— Tom Chatfield, 2010
7 ways games reward the brain**



Minecraft

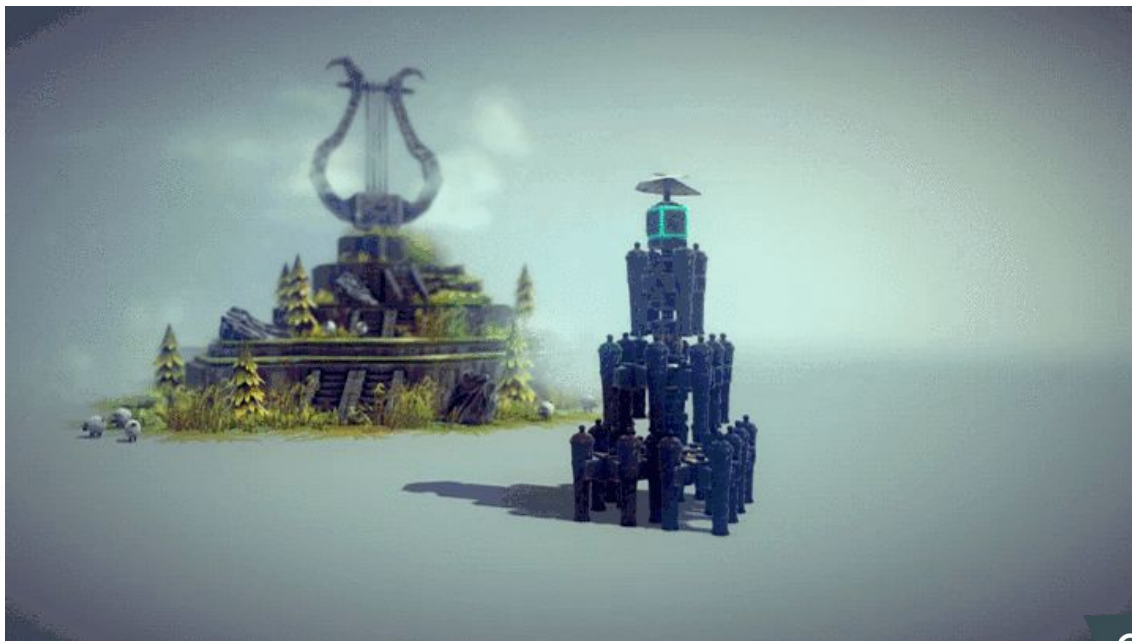


- 250,000 students
- 2000 schools
- 40 countries



Problem Solving

How can we leverage Video Games for learning?



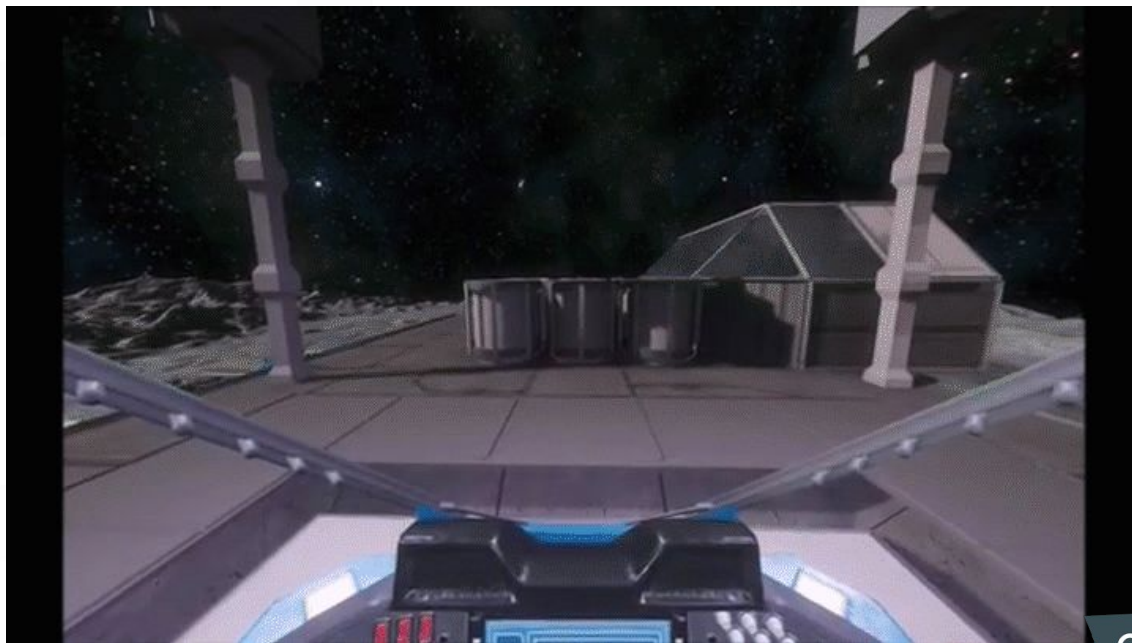
Problem Solving

What skills can be taught in this medium?



Problem Solving

When does Gaming end and Programming start?



Docker Than Light

Docker Than Light

What are "RESTful Microservices running in Containers"?


How can we make these topics more approachable?

How can we make learning to code more fun?

Docker Than Light

- Multiplayer Docker container programming game
- Driven by Ship < - > Container analogies
- Created during Docker Hackathon Oct 2015
- <https://github.com/beanieboi/docker-than-light>



Benjamin Fritsch
Senior Software Engineer @ Codeship
:beanieboi

Docker Than Light

Docker + REST provides complete isolation - language agnostic

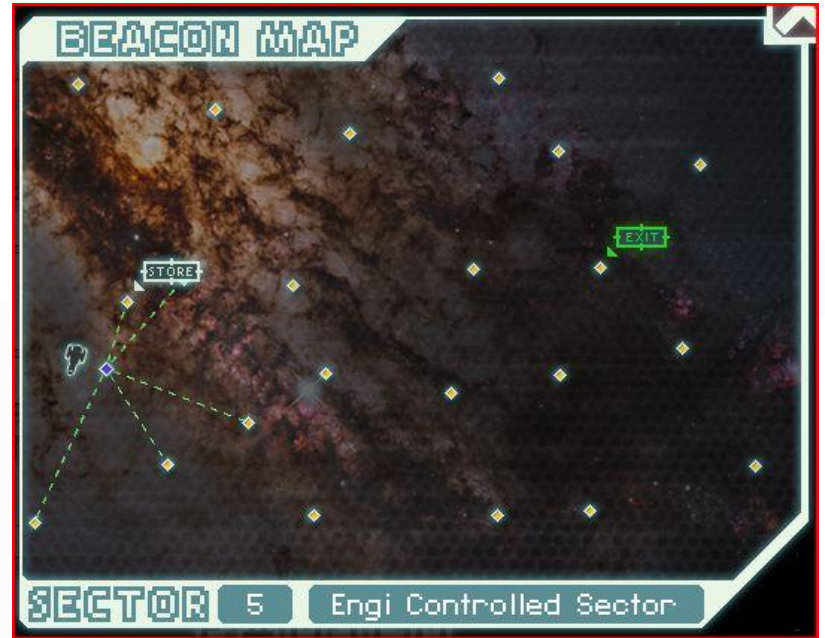
Submissions are simply a container adhering to a microservice contract

Container isolation prevents shenanigans



Docker Faster Than Light

- Exploration and combat
- Discrete positioning
- Discrete positioning



Docker Than Light

The Simulation

- Ships travel between sectors
- Ships scan for other ships
- Ships can fire on other ships
- If health ≤ 0 ship is killed
- All actions have probability of success

Docker Than Light

Ship API

- Scan sector/ships
- Fire at ships
- Change sectors

Master API

- Ping ships
- Notify ships of hits/scans
- Controls source of truth for ship state
- Updates ships with new state
- Communicates simulation rules

Docker Than Light



Discussion

Q&A

Come see us at Booth S13

Problem Solving

How can we leverage Video Games for learning?

Problem Solving

What skills can be taught in this medium?

Problem Solving

When does Gaming end and Programming start?

Thank you!

