Knowball

Team

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Background

We love sports. We'd all, at one time or another, sat around naming obscure athletes with friends. It's a sneaky challenge that never seems to get old. So, we thought "Why not make it a computer game?" Writing a computational model for obscurity was intriguing and, of course, would show us who really knows ball :)

Goals

Develop an accurate model of obscurity.

Practice good data science in sourcing and leveraging our dataset.

Design and bring to life a smooth, engaging UI.

Produce a game that's fun to play.

Merits

Knowball's most interesting aspect is the use of AI to quantify obscurity. Today, AI is hardly novel. However, we ventured to test its efficacy for computing a vague, human concept. Sourcing the dataset needed to train it was a challenge, too. We derived a statistical picture of obscurity, pulled corresponding data from public sources, and then transferred it to our database with an automated pipeline. More details are provided throughout this presentation!

Impacts

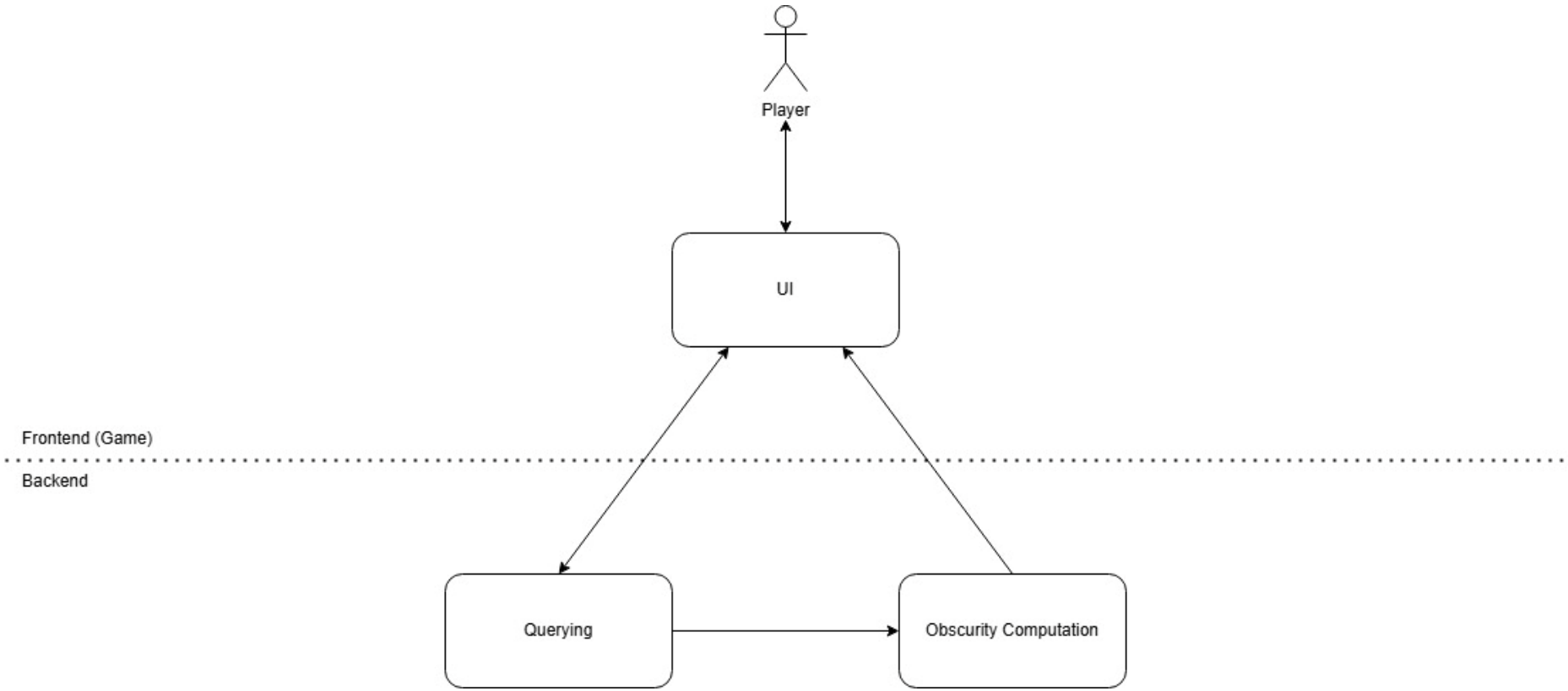
Experimental offering to human-like computation.

Ethical use of AI.

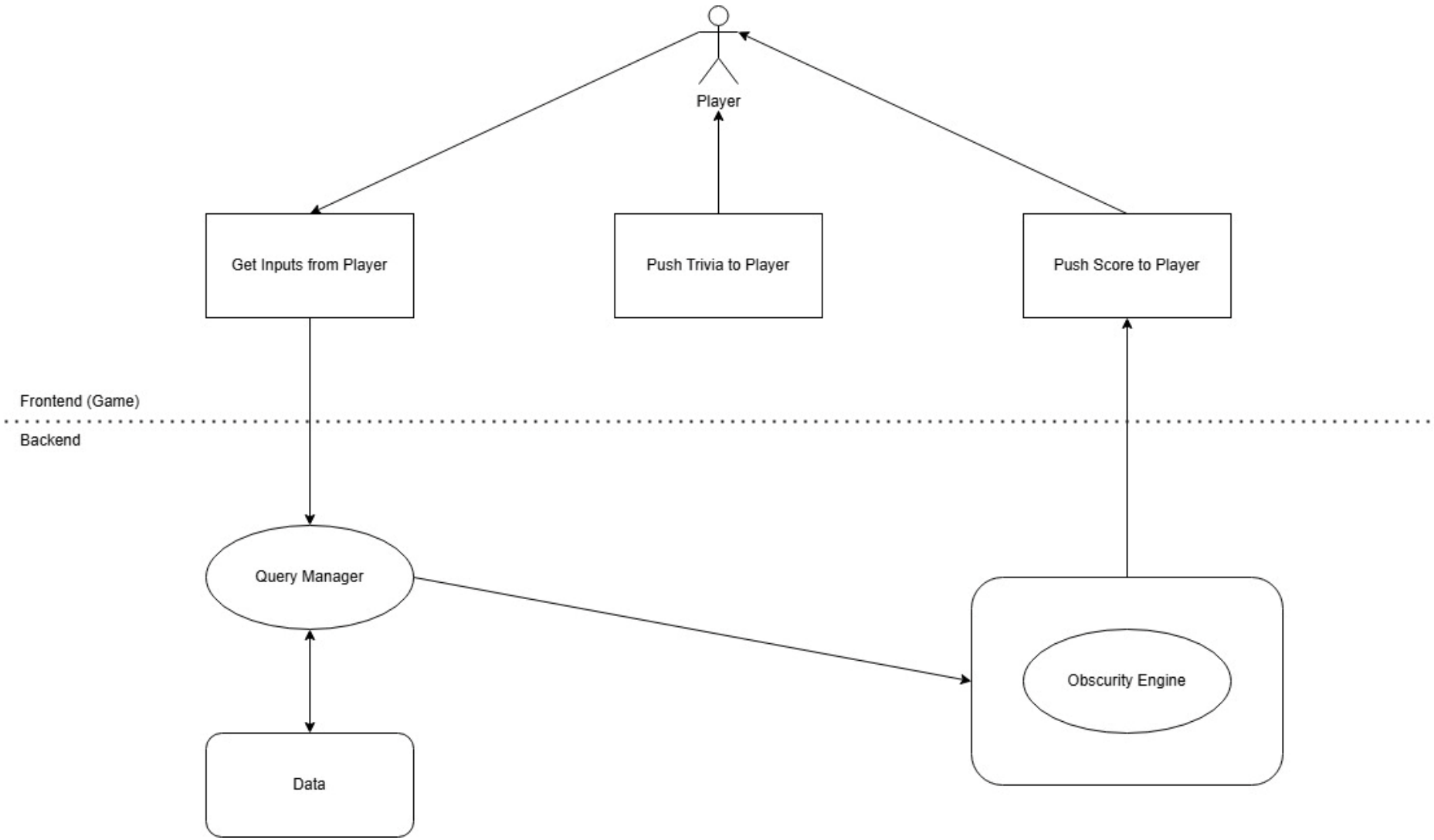
Fun, shareable, low-commitment leisure activity!

Bringing a little joy back to frontend design.

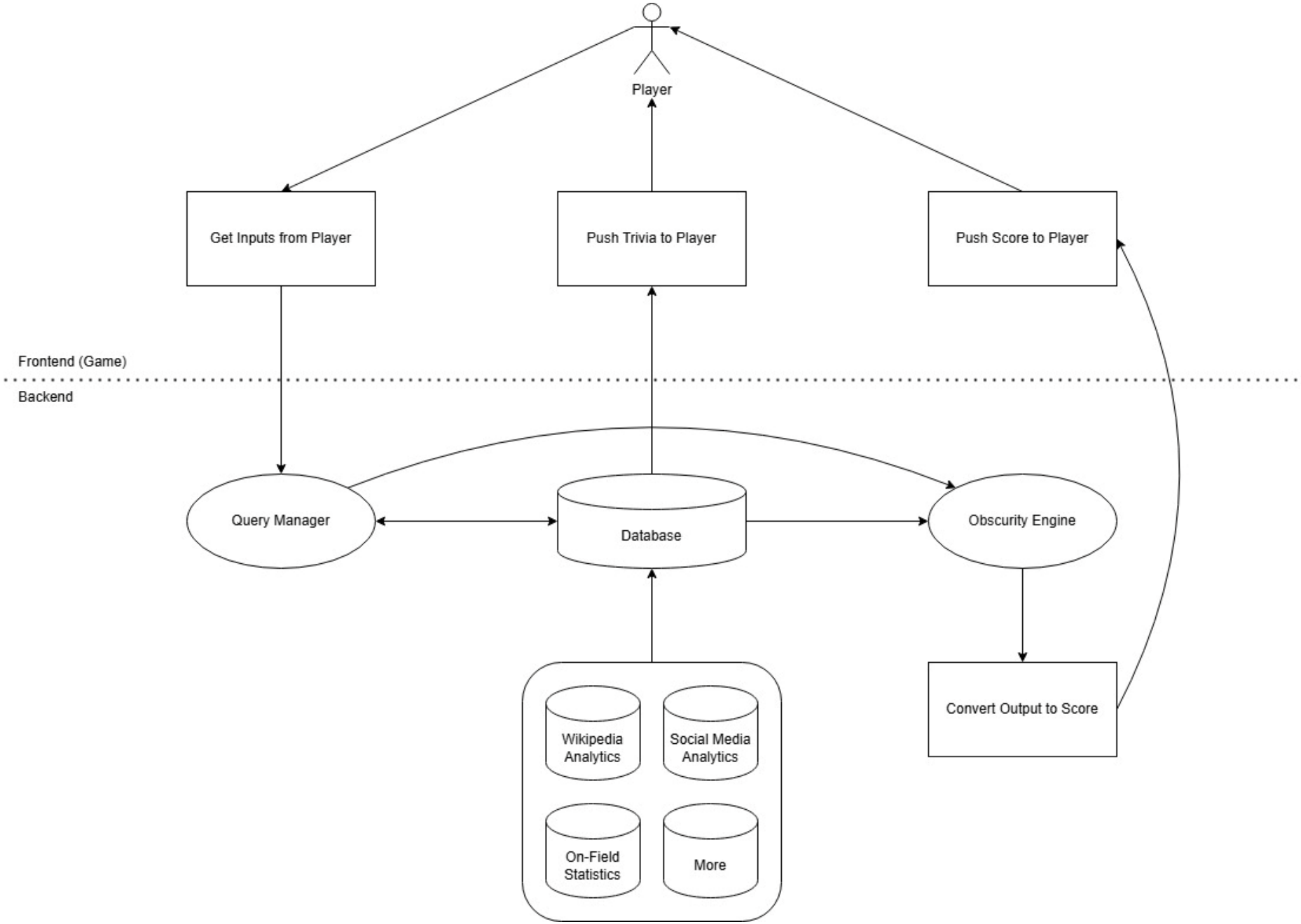
L1


Player
UI
Frontend (Game)
Backend
Querying
Obscurity Computation

L2


Player
Get Inputs from Player
Push Trivia to Player
Push Score to Player
Frontend (Game)
Backend
Query Manager
Obscurity Engine
Data

L3


Player
Get Inputs from Player
Push Trivia to Player
Push Score to Player
Frontend (Game)
Backend
Query Manager
Database
Obscurity Engine
Wikipedia Analytics
Social Media Analytics
On-Field Statistics
More
Convert Output to Score

Technologies

External

STATHEAD

Wikipedia
The Free Encyclopedia

Backend

Engine

Frontend

Milestones

Jan 20	Feb 3	Mar 17	Mar 31
Research & data sourcing	Backend setup & data transfer	Obscurity Engine operational	Production UI & gameplay loop

Continuous Revisions

Results

- [x] Research & data sourcing
- [x] Backend setup & data transfer
- [ ] Production UI & gameplay loop
- [ ] Continuous Revisions

Progress

As indicated, the Obscurity Engine, UI, and continuous revisions remain to be completed. However, work on all systems is underway. Currently, all core gameplay mechanics are implemented, pending only refinements and a mature Obscurity Engine. It follows that the engine is a largely-untuned working draft, still needing data cleansing and parameter optimization for satisfactory accuracy. We will focus our resources on that, while continuing to revise elsewhere in the project.

Challenges

Sourcing data was our biggest challenge. No free dataset or public API had the necessary breadth and depth, so we had to compile our own. Our data engineering process was an undertaking and an accomplishment, not least in that it's compliant with all ToS.
Developing the Obscurity Engine was rather difficult, too. In early versions, many athletes clustered around a narrow range of obscurity scores. We curbed the behavior, in part, by supplying only those parameters that a human might care about — resulting in a more human-like readout.