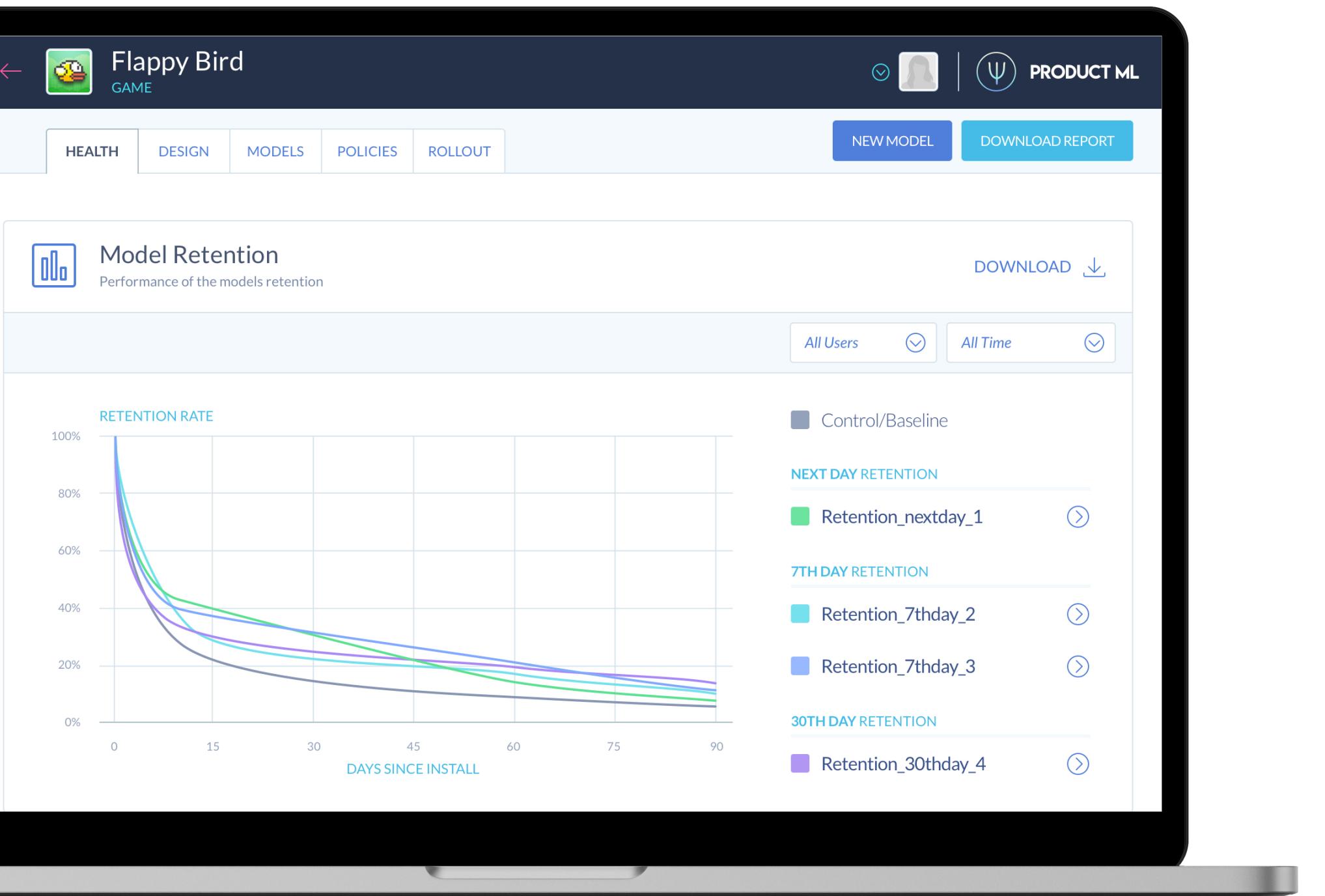


ML Dashboard

PRODUCT ML

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Vision

MACHINE LEARNING TO SHAPE PRODUCT EXPERIENCE

Problem

- The Product Management community is very interested in ML but lacked the knowledge to be able to use it
- To harness the power of ML, companies require significant infrastructure to use and train a live model
- The product requires different workflows to integrate ML

Opportunity

- The ML provider market is limited, goes from complete custom configuration to a very limited platform
- There is no offer in the market for an ML platform focused on product experience
- Top grossing games have all the requirements to use ML effective to customise the playing experience and are mature enough to identify the opportunity

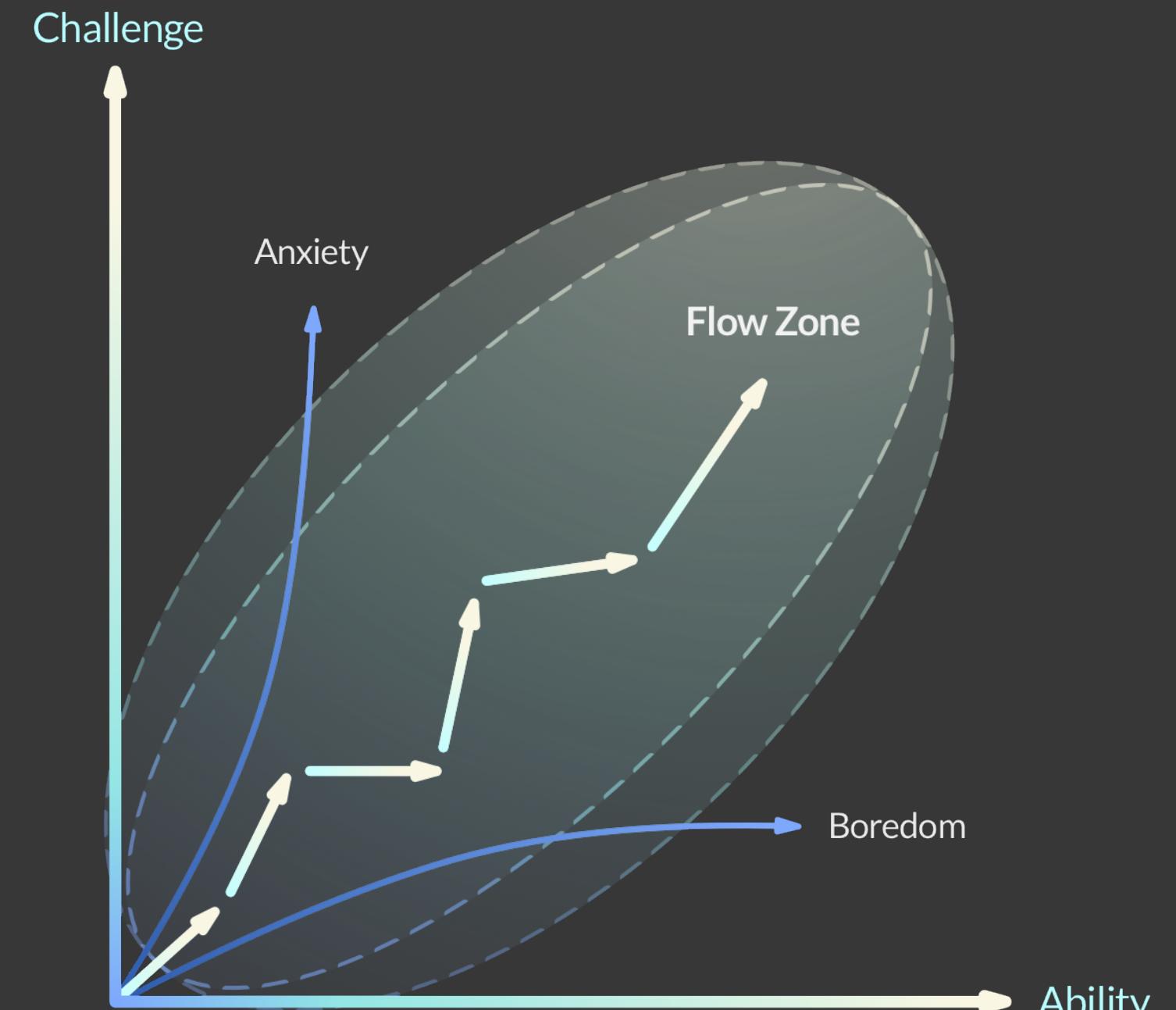
UX Strategy

DYNAMIC GAME DIFFICULTY WITH MACHINE LEARNING

Fun = Retention

Hypothesis

- There is a right win rate that maximizes fun for a user session
- This win rate is highly variable and depends on the user context and activity
- Serving the right win rate for a user maximises fun and hence, long term retention in the game
- ML can determine the right win rate and change difficulty configuration to grow long term retention and revenue



Market Research

- For ML to be accurate enough it needs enough data, only games with more 500K monthly users mattered, also the core experience of the game need it to be variable
- 30% of the market had the amount of sessions needed
- 80% of the top 50 grossing games had an experience variable enough for ML to control important “levers”, like number of enemies and affect difficulty

Source: Games for Learning Institute, KP internet trends report 2017

User Stories

- Hypothesized on users types, goals, how and when they would use our product
- Identified 2 main users profiles, PM and Game Designer

UX Vision

MACHINE LEARNING AS AN EASY TO USE PLATFORM

User Interviews

- Interviewed 10+ Game Designers and Product Managers
- The goal of the interviews was to register interest and get a list of user needs
- There was clear interest from the user and we could prioritise a set of features to build a useful simple tool

Problem Understanding

- In order for me to understand how ML works and how can we use it in a product, besides interviewing our own team, I took an intro ML course in coursera by Andrew Ng

Prototype

- Defined the app flows for the user profiles and type of action, we identified all user needs and screens to complete the goals
- Worked with the PM to define a scope for an MVP, we decided to design a Desktop version, according to the user interviews that would be the main device of the user
- Designed the UI and created an invision prototype

The image shows two screenshots of a software application interface for managing game parameters.

Top Screenshot: Game Setup

This screen is titled "Game Setup" and describes the task as "Setup the SDK to match the game type, value returned and test config". It includes sections for "WIN OUTCOME TYPE" (radio buttons for "Win Ratio", "Avg Score" (selected), and "Time"), "PLAYER PROGRESSION" (radio buttons for "Multi Levels" and "Single Level" (selected)), and two large buttons at the bottom: "SAVE" (in blue) and "CANCEL" (in pink).

Bottom Screenshot: Levers

This screen is titled "Levers" and describes them as "Configurable parameters that can change the difficulty of the level and the experienced win rate". It lists three parameters with configuration sliders:

- Gap Height:** Range of Numbers. Current values: MIN VALUE 104, MAX VALUE 265, DEFAULT VALUE 170.
- Pipe Distance:** Range of Number. Current values: MIN VALUE 280, MAX VALUE 425, DEFAULT VALUE 390.
- Camera Speed:** Increase Number. Current value: START RATE 3. Below it, there is a "Curve: In Cubic" option with a small graph icon.

A "NEW LEVER" button is located in the top right corner of this section.

MVP

User Testing

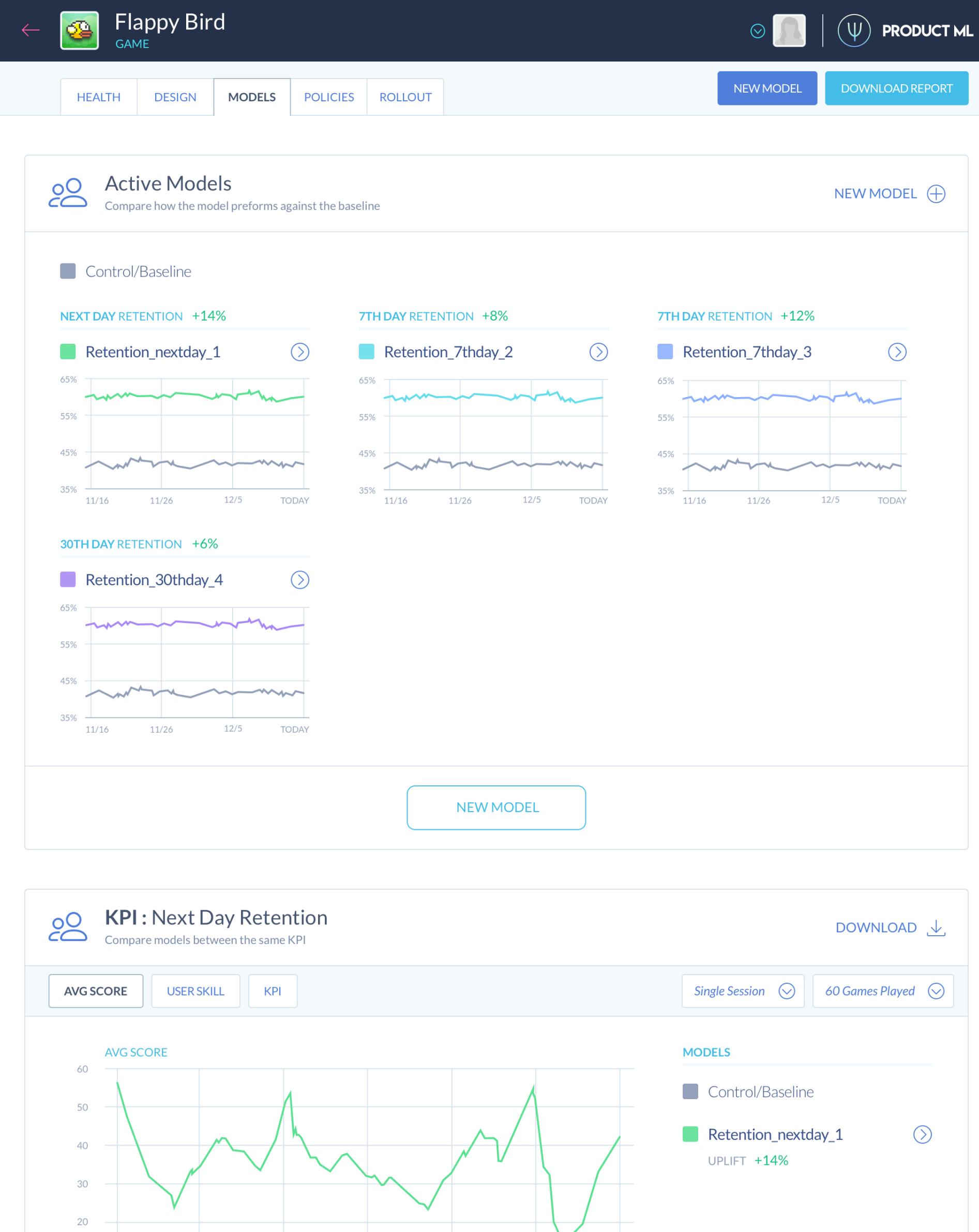
- We organised 15+ sessions where we invited Product Managers and Game Designers and resulted in 3 iterations

Storyboards

- With the goal of defining all components functionalities, I've designed 2 storyboards for the "Design an experience" and "Create a new lever"
- This is a great way to present to the team all the functionalities, instigate questions and predict any problems

Development

- Presented all findings and exported all assets
- Worked really close with the development team to speed up development, constant reviews and an helping hand with CSS



HEALTH DESIGN MODELS POLICIES ROLLOUT

NEW MODEL DOWNLOAD REPORT

 Active Policies

It's advisable to use 5 or less policies

ADD POLICY 

First 14 days don't change the pipe distance

VIOLATIONS 493 (0.75%)

INSPECT 

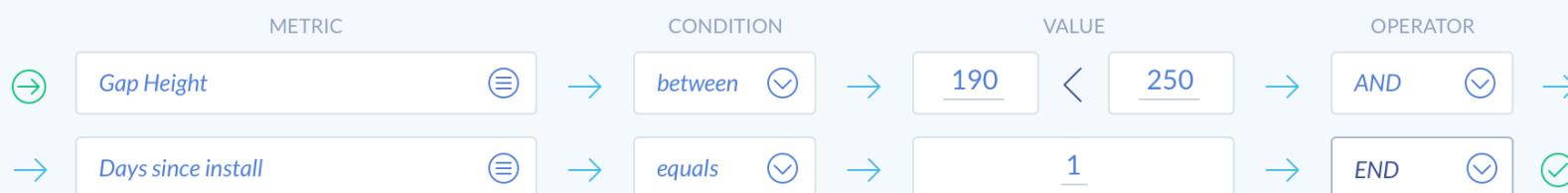
⋮



First day keep the gap height between large values

VIOLATIONS -

⋮



ADD POLICY

HEALTH DESIGN MODELS POLICIES ROLLOUT

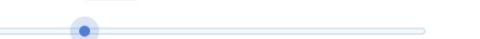
NEW MODEL DOWNLOAD REPORT

 User Rollout

Define which model the user is going to get on the session start

RESET VALUES 

Control/Baseline

 USERS 20%

NEXT DAY RETENTION +14%

Retention_nextday_1  USERS* 18%

7TH DAY RETENTION +8%

Retention_7thday_2  USERS* 18%

7TH DAY RETENTION +12%

Retention_7thday_3  USERS* 26%

SAVE

CANCEL