DATA SCIENCE IN

VIDEO GAME INDUSTRY

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The Industry's Projection in 2020

$159.3 billion of revenue

2.7 billion players

~59 Tb of data per day

Efficient Use of Data Science

8 DS Applications in Gaming

Game Development

Visual Effects & Graphics

Game Monetization

Personalised Marketing

Game Design

Fraud Detection

Object Identification

Social & Customer Analysis

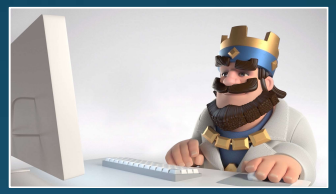
Supercell // Clash of Clans

Generated revenues of c.a. $2 billion in 2017 without introducing any new game.

SUPERCELL

Data Collection

Information



Knowledge

Analytical Thinking

Insights

Insight Thinking

Supercell // Pitfalls

Caned 3 games in 2011/12 due to poor monetization, despite some positive reviews.

Pitfall 1
Did not interest players long enough

Pitfall 2
Difficult gameplay

Pitfall 3
Launched on wrong platform

Supercell // Success Factors

Reimagined Process: Completely re-think processes by applying data and analytics in such a way as to dramatically increase quality, lower costs and speed time to delivery.

Customer Intelligence: Capture data on customer behaviour and preferences, both expressed and observed, to provide more enriching experiences, tailored offerings, and secure a long-term loyal relationship.

New Business: Use data in new ways to create new monetization streams, either directly from the data itself, or as a by-product of understanding the data to uncover new opportunities.

Balanced Risk/Reward: Increase confidence in decision-making processes to optimize business outcomes and increase agility without incurring undue risk.

AI in the Video Game Industry

Machine Learning // Reinforcement Learning

The Learning Agent

Rewards // State

Actions

Environment

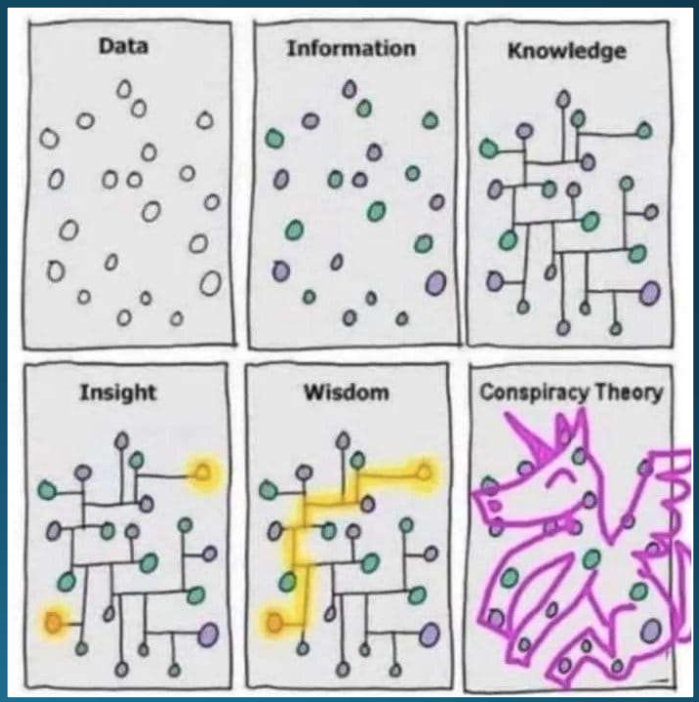
- More powerful AI (realistic NPC)
- Reveal hidden flaws in previously unquestioned analysis (game testing)
- Rebalancing of gameplay on-the-fly (gameplay personalization)

AI in the Video Game Industry

Machine Learning // Reinforcement Learning // PAC-MAN

Conclusion

- Industry has been growing exponentially with increasing number of active players.
- Data-driven culture to build the best gaming experiences and in turn increases revenue.
- Digitally mature by taking advantages of technological developments to constantly evolve the way they work.
- Early AI adopters in bringing games to life and improving the gameplay experiences.



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That's all Folks!