

Solving the app market with only grit, hustle, and a Spark cluster

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30 minutes is a lot to ask





Who are we?







Apptopia is a mobile app intelligence company

Company Overview





~40 employees



~6 years in business



Trusted by > 35,000 publishers worldwide.



>\$4m raised from major investors like:







Boston, MA (Headquarter) Finland

Kiev, Ukraine





Standing "on the shoulders of giants"



Eli Sapir Co-Founder & CEO



Jonathan Kay Co-Founder & COO



Serge Balyuk VP of Engineering

We power mobile intel data for the best

























apptopia.com



Apptopia empowers mobile stakeholders



There is so much more to mobile than games





apptopia.com



User demographics and behavior

Wealthfront



97%



3%



GoToWebinar



40%

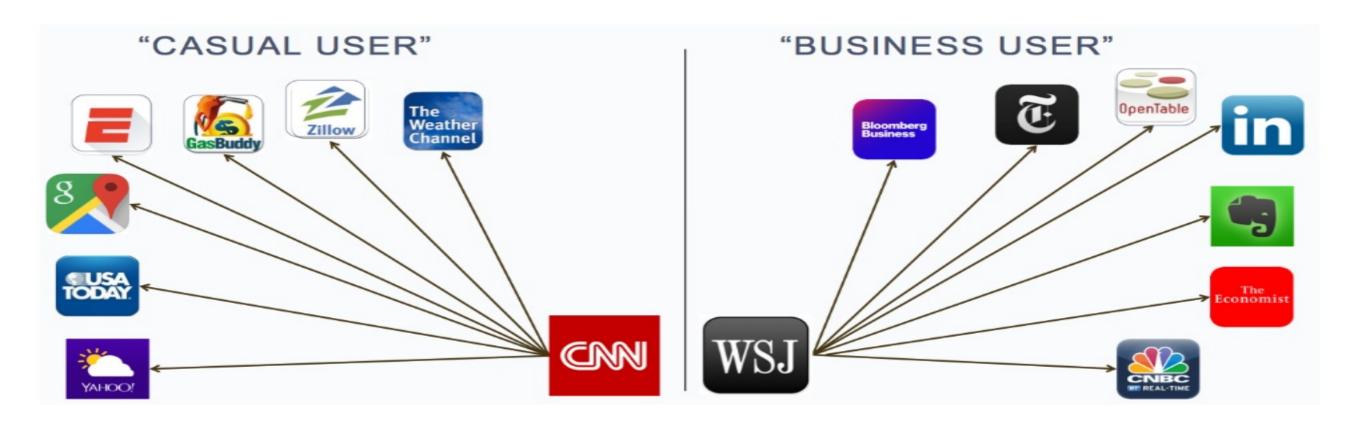
60%





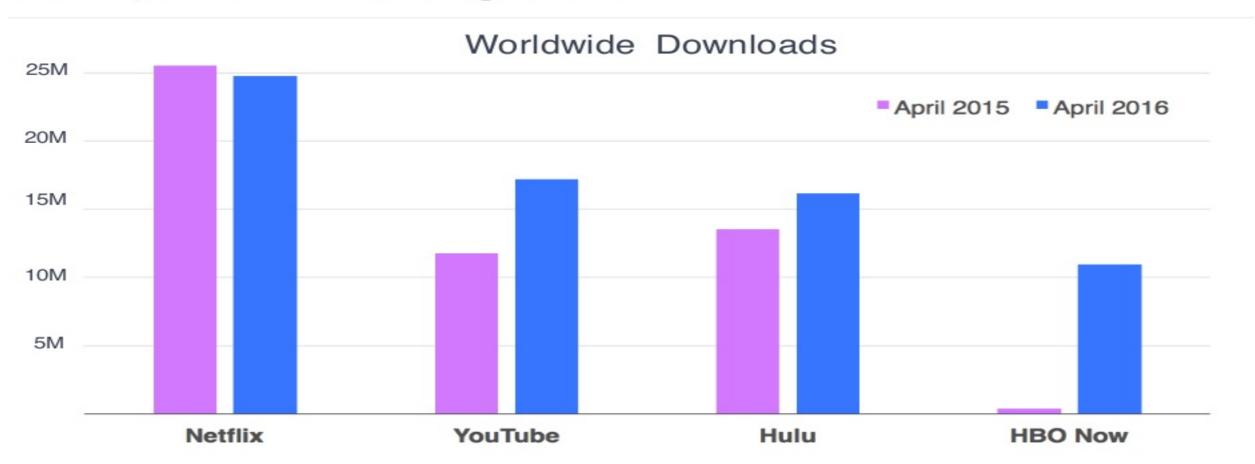






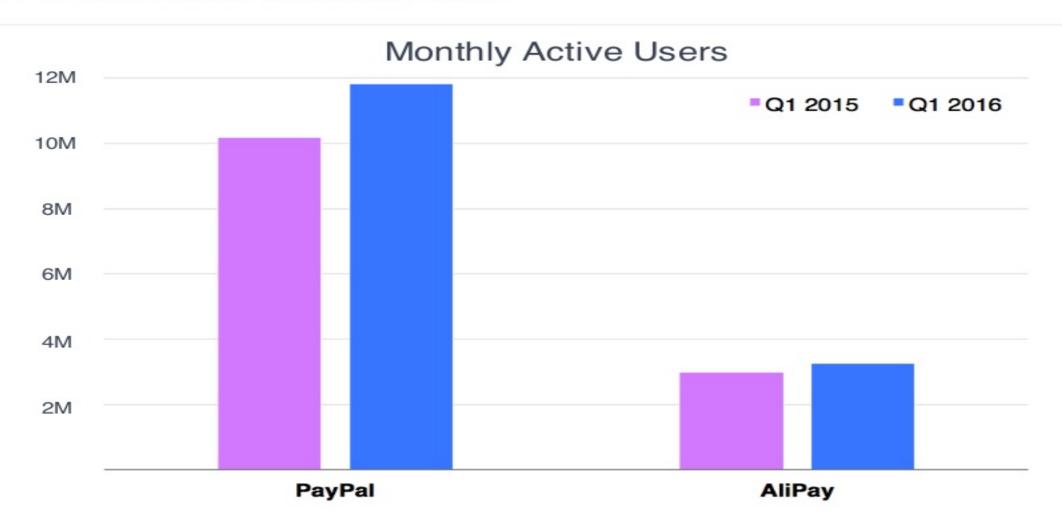


Competitive intelligence











Advertising optimization





Apptopia is on a mission to solve the app market







We combine public and proprietary data



Historical
Performance of
>200K Apps



- ✓ Ranks
 ✓ Publisher
- Ratings Descriptions
- Reviews Screenshots
- Price Versions

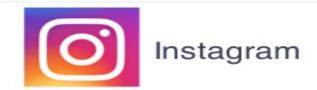


Public data is predictive of performance





Rank is the most predictive feature



Current Rank (Free)

(Today, Oct 20, 2016)



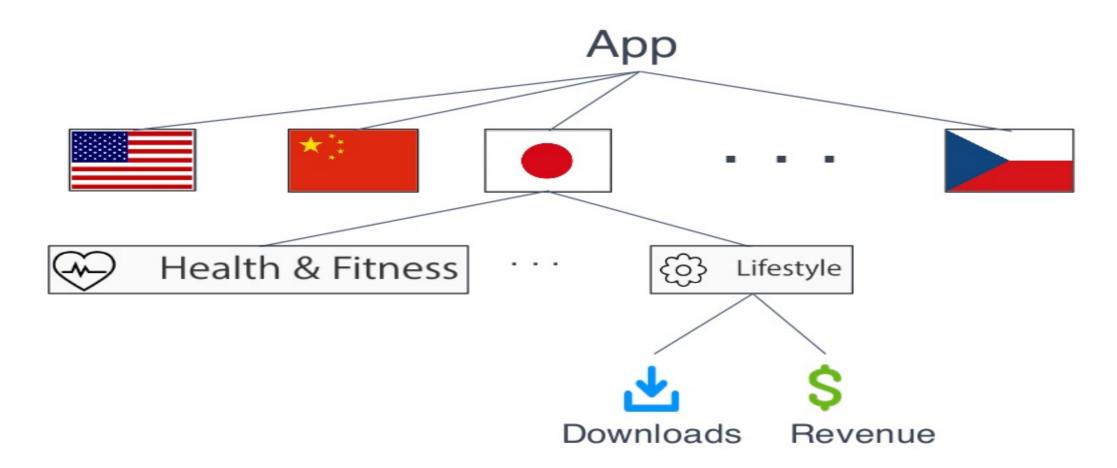
⊕	12	Instagram	8-15
	11	Snapchat	7-13
	10	YouTube	7-15
	9	Facebook	9-17
	8	Messenger	7-15
	7	Plants vs. Zombies™ Heroes	7-21
	Rank	App Name	30-day Range

Photo & Video

Rank	App Name	30-day Range
1	iMovie	1-1
2	YouTube	2-5
3	Snapchat	2-4
4	Instagram	2-5
5	Artisto - Video and Photo Ed	2-132
6	Layout from Instagram	5-7

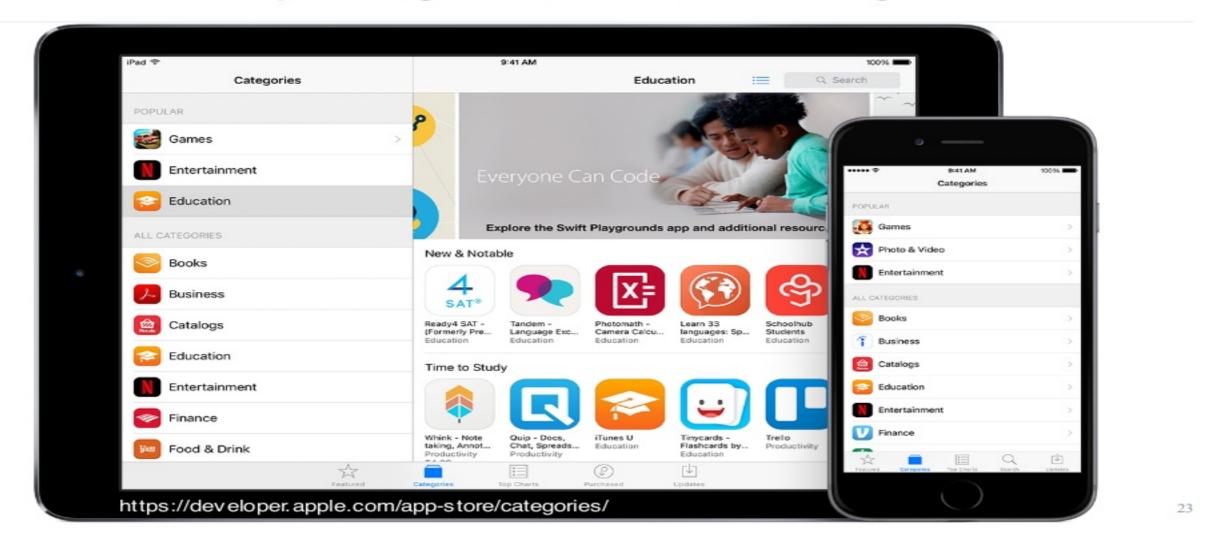
Rank is also the most complex (i.e., fun) feature





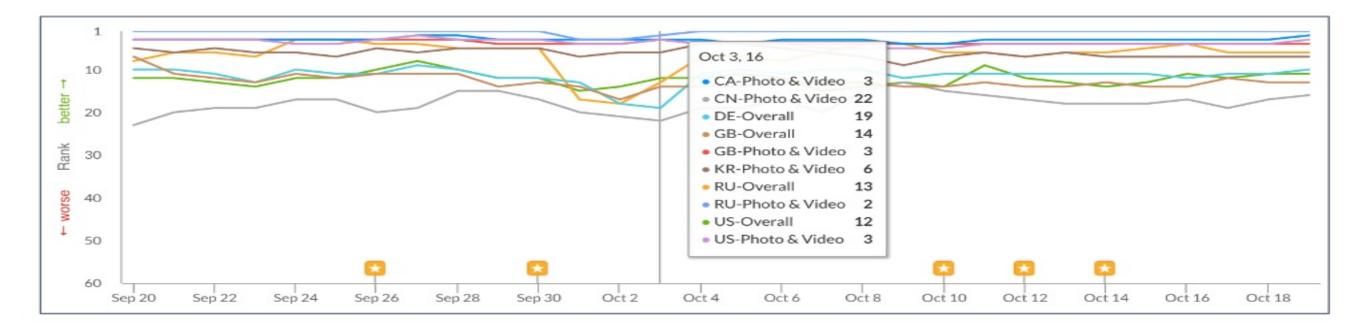


There are many categories and sub-categories



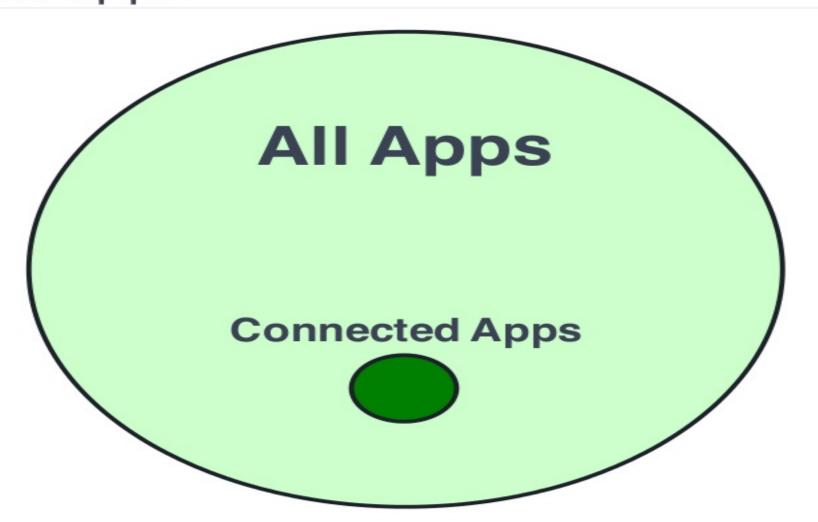
The constellation of ranks is complex and constantly evolving





We build models with data from connected apps







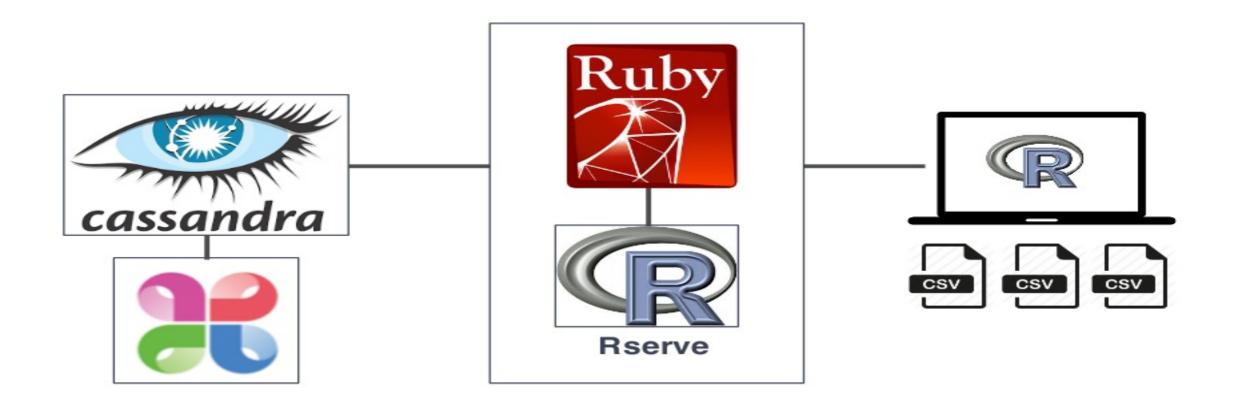
For any app, day, country







First generation training and scoring



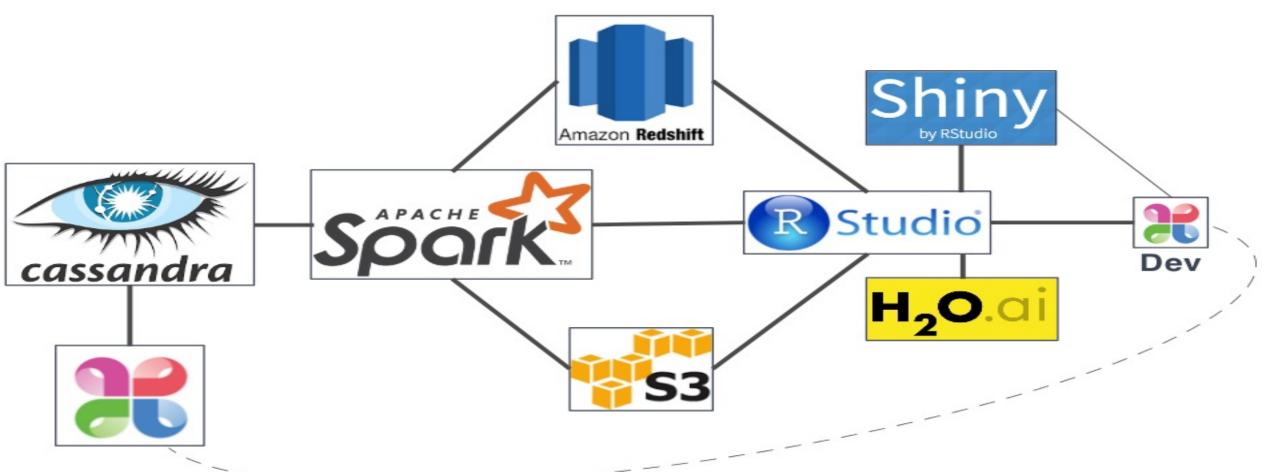
This was not a viable path forward



Slow scoring (~2 months)

Project Khaleesi







2 months to 2 days





Systematically compare hundreds of models using 20x more data



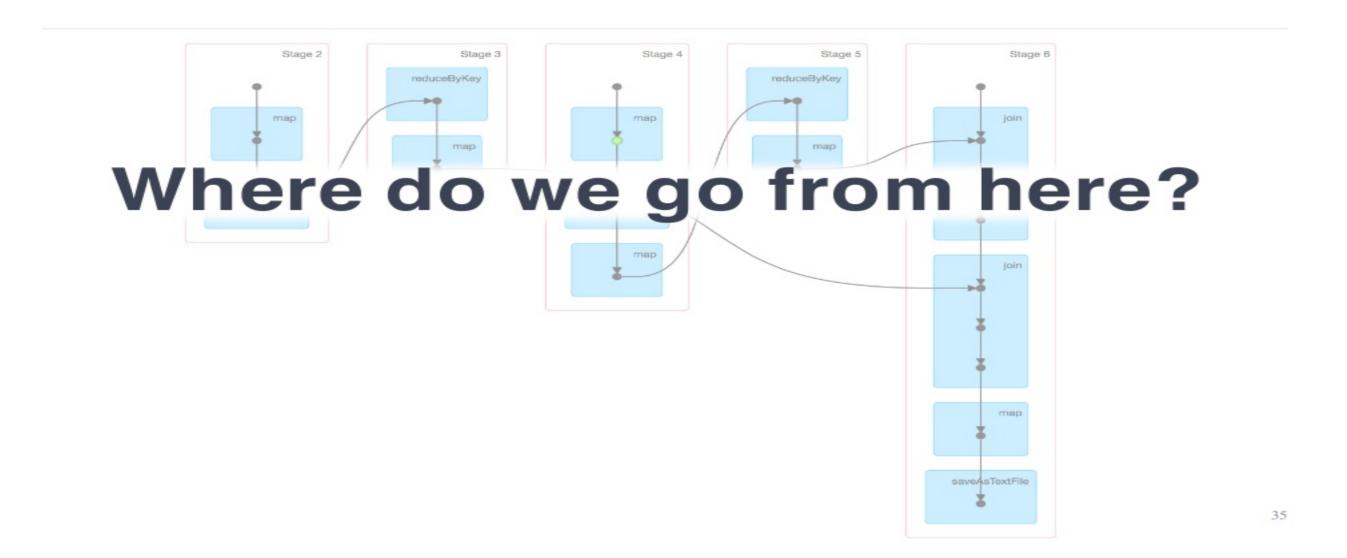


Spark and other open source tools have transformed us









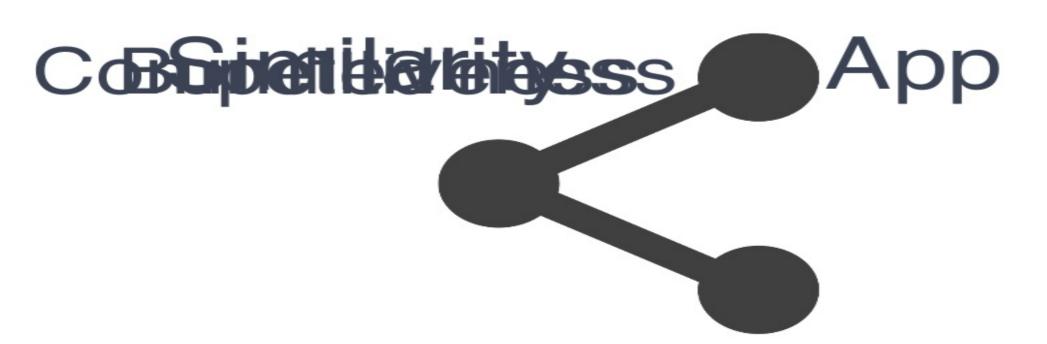


The global app market is a complex dynamical system















Here's 4 things we learned



First solve for the human side of the equation



Avoidance should precede optimization



Make big data small data

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} \quad \bar{A}^1 = \frac{1}{|A|} \begin{bmatrix} d - b \\ -c & a \end{bmatrix}$$



Edges are more important than nodes

















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