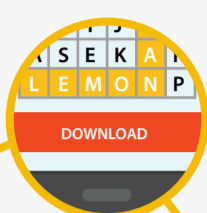# A CLOSER LOOK
INTO APPBRAIN'S ADVERTISING SYSTEM

Alice has just finished a new level in her favorite Android puzzle game when an ad appears on her screen.

DOWNLOAD

1 "Get more free apps for your phone" She decides to tap on the DOWNLOAD button to see what kind of good stuff is waiting for her.

2 The puzzle app that showed the banner pings the AppBrain servers to request an app ad.request an app ad.

3 The app ad is chosen from our many promoted apps. To decide which promoted apps are eligible to appear in the puzzle app, we look at the the Google Play content rating of the promoted apps and the countries they target.

Language	Device type	Android version	Carrier	Country	Content rating
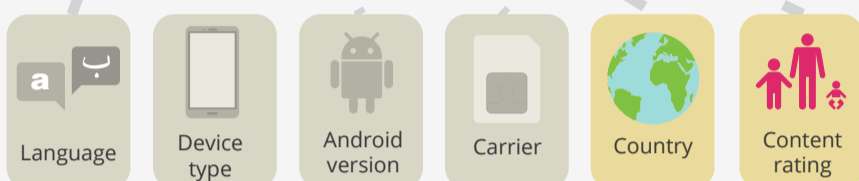
4 Since Alice is in the US, we only show ads that target US users and have a Google Play content rating appropriate to her puzzle app.

5 To choose which apps Alice might like and want to install, our machine learning algorithm matches data like device type and Android version from the puzzle app to the data from the promoted apps' install history.

Language	Device type	Android version	Carrier	Country	Content rating
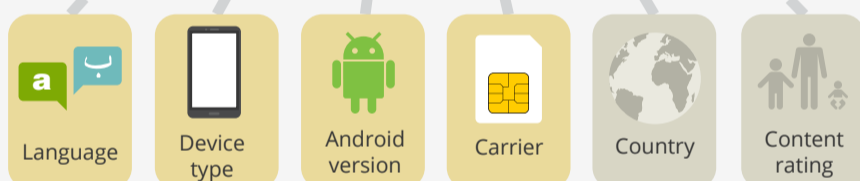
predicted install rates

6 Our auction system first ranks the promoted apps based on their CPI bids and predicted install rates and then calculates their install prices. The price that you eventually pay for an install might be less than your bid price since you only pay enough to beat the next best app in the ranking.

Price might be less than your bid price

	CPI bid		Install rate (IR %)	Ad score		Actual install price
Chen	$2	✖	0.1	③	0.2	$1.80
Eva	$1.50	✖	0.2	②	0.3	$1.05
Rachel	$1.25	✖	0.14		0.17	$1.10
Thomas	$1	✖	0.4	①	0.4	$0.78
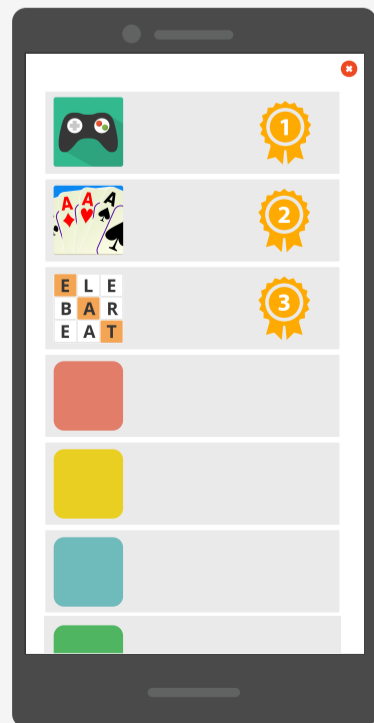
7 The 10 highest ranked apps will appear on the offer wall in the puzzle app.

AppBrain