at

scientific revenue

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“Among the most innovative companies in the space”

VentureBeat

Look

Scientific Revenue

- Dynamic Pricing for In-App Purchases
  - SaaS Platform running in AWS
  - First vertical is mobile gaming; eventually expanding out to all forms of digital content
- Venture-backed, based in Redwood City
  - 8 engineers, 4 data scientists, 2 economists, others
  - No computer science PhDs!

What is Dynamic Pricing

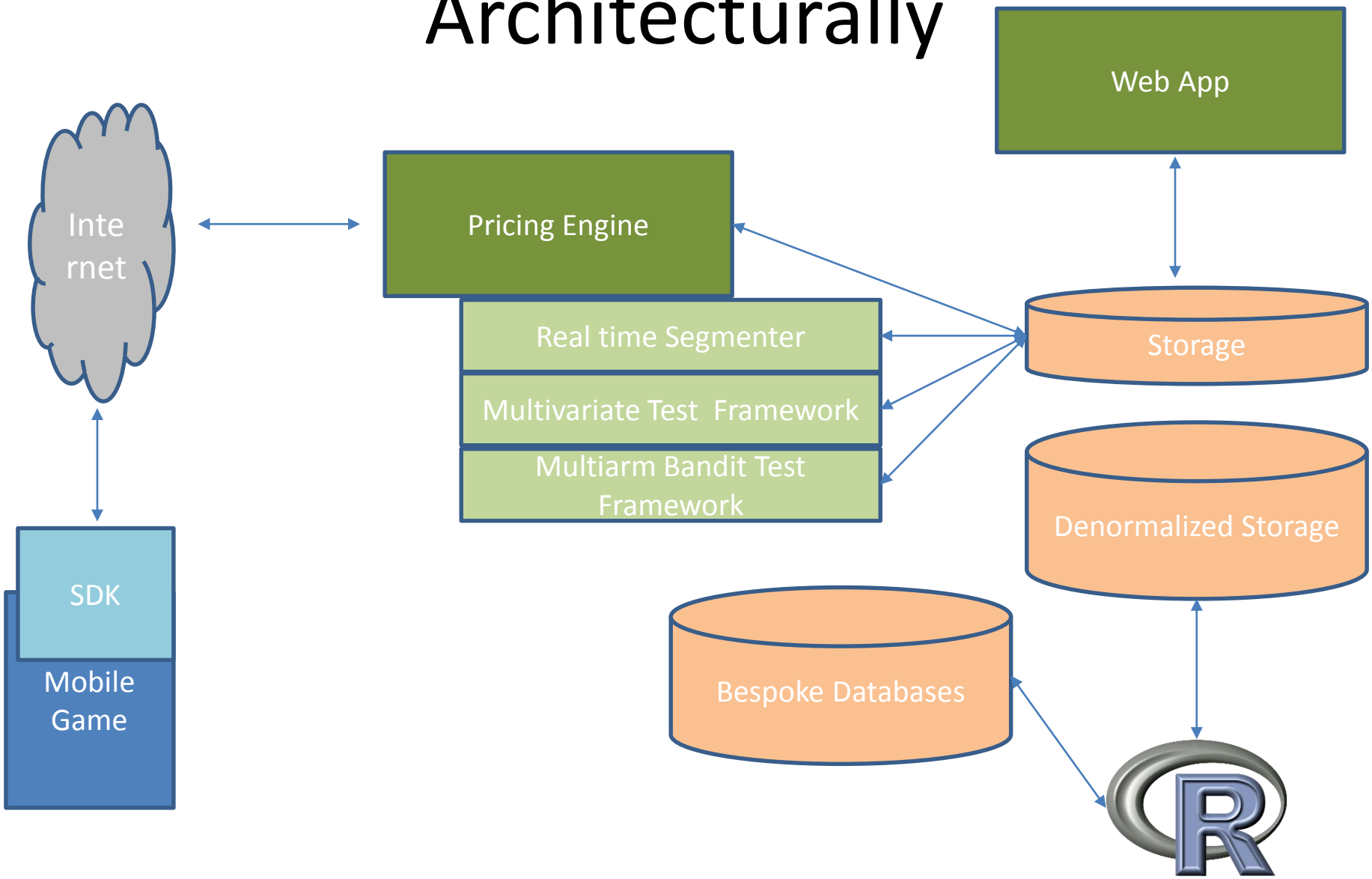
Different:

- Prices
- Coin amounts
- Framing text
- Default selection
- Different bonus types

Same:

- Call to action

Architecturally



RStudio Server Amazon Machine Image (AMI)

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Amazon's EC2 platform provides a convenient environment for rapidly procuring computational resources in the cloud. As a Statistician, my interest is specifically in statistical computation with R and the advent of RStudio Server has made it a hand-in-glove fit with the cloud.

To get started with the Amazon cloud, you must first signup for an AWS account if you don't already have one. To use the AMIs described on this page, you simply click your chosen AMI ID which will take you through to the Amazon web interface and preselect the correct region and AMI. Simply ensure that your 'security group' settings allow incoming HTTP (port 80) traffic and then copy-and-paste the 'Public DNS' for your running instance to a web browser address bar to bring up the login page.

Click here for a simple video guide to using the AMIs listed here, or for more detailed information read on.

Current AMI Quick Reference (21st Mar 2015)

Amazon instance type reference

Click to launch through AWS web interface:

Region	64-bit HVM AMI
EU West, Ireland	ami-a544dad2
EU Central, Frankfurt	ami-bc0538a1
US East, Virginia	ami-bc5877d4
US West, N. California	ami-e7a140a3
US West, Oregon	ami-73ad8143
South America, São Paulo	ami-6907bf74
Asia Pacific, Singapore	ami-2897a67a
Asia Pacific, Tokyo	ami-47f90f47
Asia Pacific, Sydney	ami-65ec9c5f

RStudio	0.98.1103	All 10GB SSD EBS store
R	3.1.3	RStudio on port 80 (HTTP)
Ubuntu	14.04 LTS	Username: rstudio Password: rstudio

What's new recently?

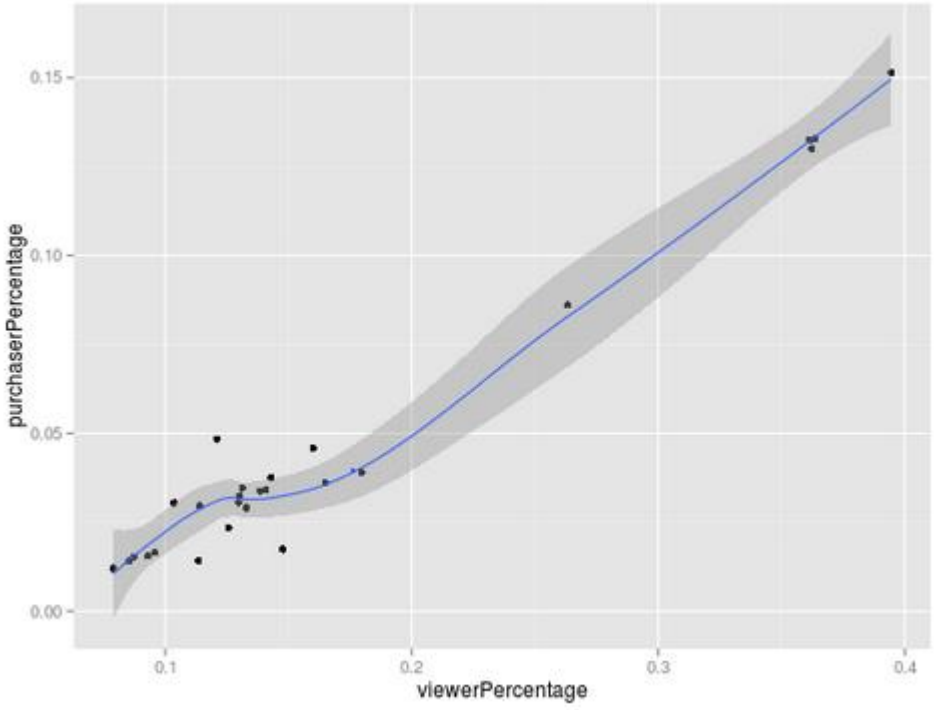
- *RMySQL package preinstalled for database access.*
- *JAGS sampler ready to run.*
- *Support for OpenMPI.*
- *HVM AMIs for full current generation instance support.*
- *Defaults to high speed SSD drives (faster, zero IO costs, only $1pm in most regions).*
- *Updated R and RStudio versions.*

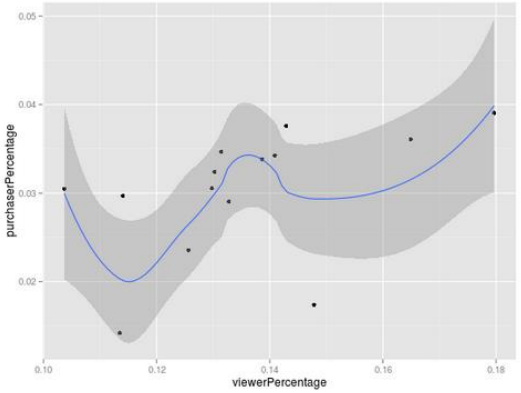
What is this?

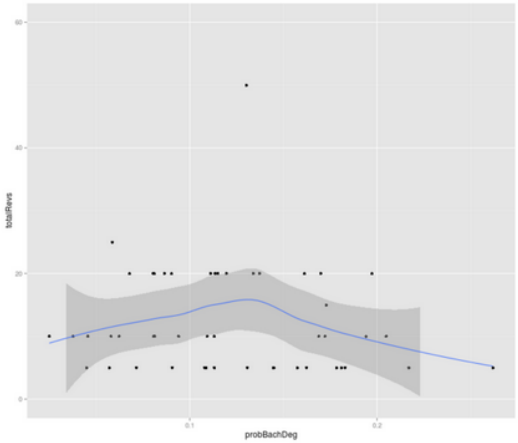
If you want to run a server in the Amazon cloud, you have to select what system you are going to bootup. This is made easy by a vast array of system images (or AMIs) which pre-pacakge a system ready for you to boot on your own custom virtual server. Many of these are simply base operating system installs, such as Debian or Ubuntu, but others add on pre-configured extra software into the image to reduce time-to-getting-stuff-done! I have created an AMI specifically targeted at R and RStudio Server with the goal of making it a 1 minute job to get going for anyone with an AWS account.

In particular, many common tools and dependencies are built-in. Features include:

Use Case 1: Ad-Hoc Analysis of Segment Behavior





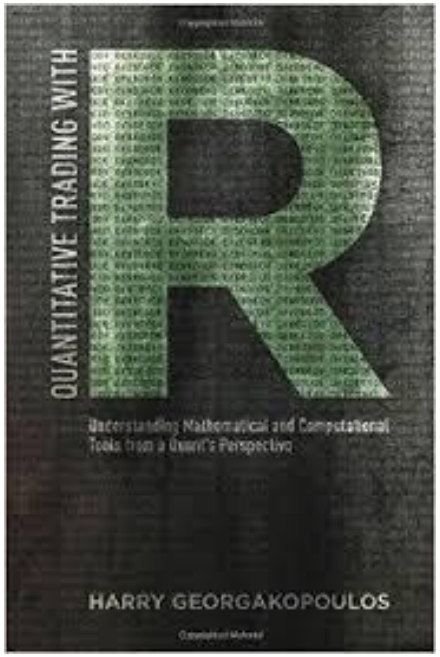


UC 2: Differential Analysis of Segment Behavior

- "Empirical Estimates" AKA "Model Training"
  - What is "high engagement"
  - What is "large first week spend"
  - We have ~70 models we train
    - 50 simple, 20 complex
- "Economic Health"
  - Is [this segment] a healthy one?
- Bespoke metrics
  - The gaming industry is essentially broken here

UC 3: Classical Economic Analysis

- Price elasticity and sensitivity
  - We have global data
  - We have FX and fluctuation data
  - We change prices
- The idea of price elasticity is actually a little broken (cf: behavioral economics)



UC 4: Outcome Analysis

- We're running multivariate tests and multiarm bandits in production
- Sometimes it's easy to understand the outcome of a test
- Sometimes it requires staring at the data
- When you're staring at the data, nothing beats R

UC 5: Supervised Learning

- Main use: Prediction
  - Longevity
  - Churn
  - Whale
  - About to Spend
  - Overdue to spend
  - Holy Grail:
    - Within 24 hours, be able to predict how long the player will stay, and how much they will spend (in the absence of intervention)
- Other uses:
  - Qualitative analysis of traffic changes
  - Creation of new segments based on outcomes

UC 6: Clustering

- Automated discovery of meaningful segments
- Cluster against data & then measure if there are meaningful differences using the EE and EH frameworks
  - Promote concepts to price management and reporting frameworks (web application)

UC 7: Archetypal Analysis

archetypes: Archetypal Analysis

The main function archetypes implements a framework for archetypal analysis supporting arbitrary problem solving mechanisms for the different conceptual parts of the algorithm.

Version:	2.2-0
Depends:	methods, stats, modeltools, nnls (≥ 1.1)
Suggests:	MASS, vcd, mlbench, ggplot2, TSP
Published:	2014-04-10
Author:	Manuel J. A. Eugster [aut, cre], Friedrich Leisch [aut], Sohan Seth [ctb]
Maintainer:	Manuel J. A. Eugster <manuel at mjae.net>
License:	GPL-2 | GPL-3 [expanded from: GPL (≥ 2)]
NeedsCompilation:	no
Citation:	archetypes citation info
Materials:	NEWS
CRAN checks:	archetypes results

Downloads:

Reference manual:	archetypes.pdf
Vignettes:	From Spider-Man to Hero – Archetypal Analysis in R
Package source:	archetypes_2.2-0.tar.gz
Windows binaries:	r-devel: archetypes_2.2-0.zip, r-release: archetypes_2.2-0.zip, r-oldrel: archetypes_2.2-0.zip
OS X Snow Leopard binaries:	r-release: archetypes_2.2-0.tgz, r-oldrel: archetypes_2.2-0.tgz
OS X Mavericks binaries:	r-release: archetypes_2.2-0.tgz
Old sources:	archetypes archive

Reverse dependencies:

Reverse imports:	Anthropometry
Reverse suggests:	benchmark, SportsAnalytics

Thank You