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GDC 2015: Analytics 101

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Talk Overview

- Setting up: Why are you doing this? What do you need up front?

- Definitions, acronyms, jargon

- Understanding a distribution

- Segmentation, cohort analysis

- (more in 201⋯)

Before you do anything else

- You want to be "data driven." Great. Really?

- What do we want to know?

- How will we act on it?

What do we want to know?

- How much money have I made this (day/week/month/period)?
- How much money am I likely to make in the coming (day/week/month/period)?
- How stable is my player base?
- What is my churn rate?
- Which players are likely to leave in the next period?
- How much are each of my players worth?
- Which promotions are generating positive results?
- Do my players generate value among each other, or are they relatively isolated?
- Which marketing sources are leading to conversions? What is the ROI on each?
- What mechanics drive player churn?
- What mechanics drive player conversion?
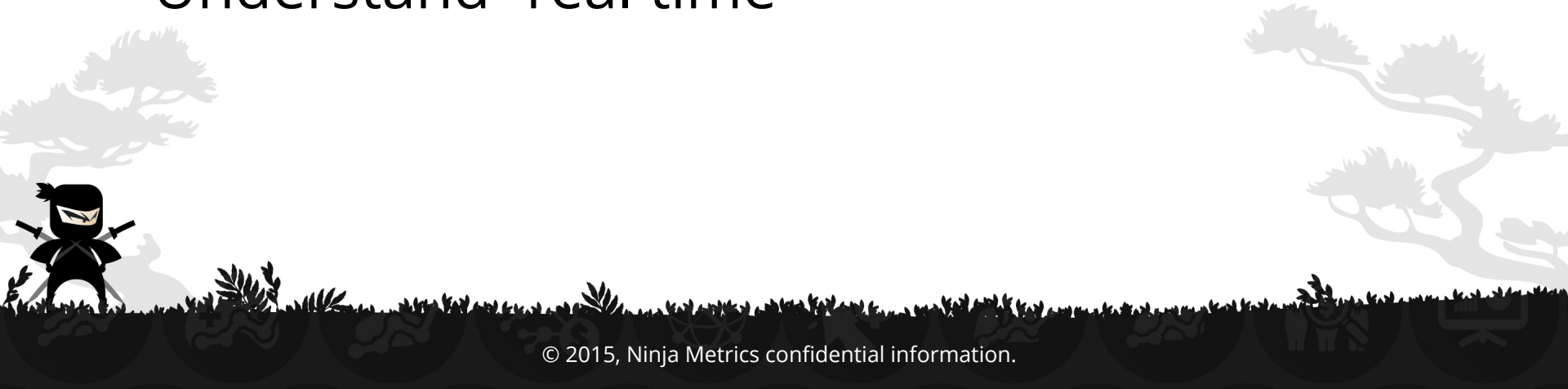- What are the effects of the changes I've made?

How will we act on it?

- Benchmark reporting?

- Actionable? OK, who's acting?

- What tools? Can you reach players (in-app, email, push)? Can you have systems, e.g. queuing, matchmaking, call those results tables?

Setting Up

- Instrumentation

- Review the SDK

- Make security decisions, Enterprise vs. SaaS

- Understand "real time"

Definitions, Acronyms, Jargon

Acronym Soup:

- DAU

- Concurrency

- MAU

- DAU/MAU

Definitions, Acronyms, Jargon

- ARPU/ARPPU

- Retention

- Churn

- Conversion

Definitions, Acronyms, Jargon

- Session metrics: Avg. Length, Avg. # of Sessions

- Virality

- K-Factor vs. other approaches

Definitions, Acronyms, Jargon

- CaC: Cost of Customer Acquisition
  e.g. PAX: $20, Google Ad $1.50, Ad platform $1

- LTV: Lifetime Value
  PAX: $35, Google Ad $2.50, Ad platform $1.25.

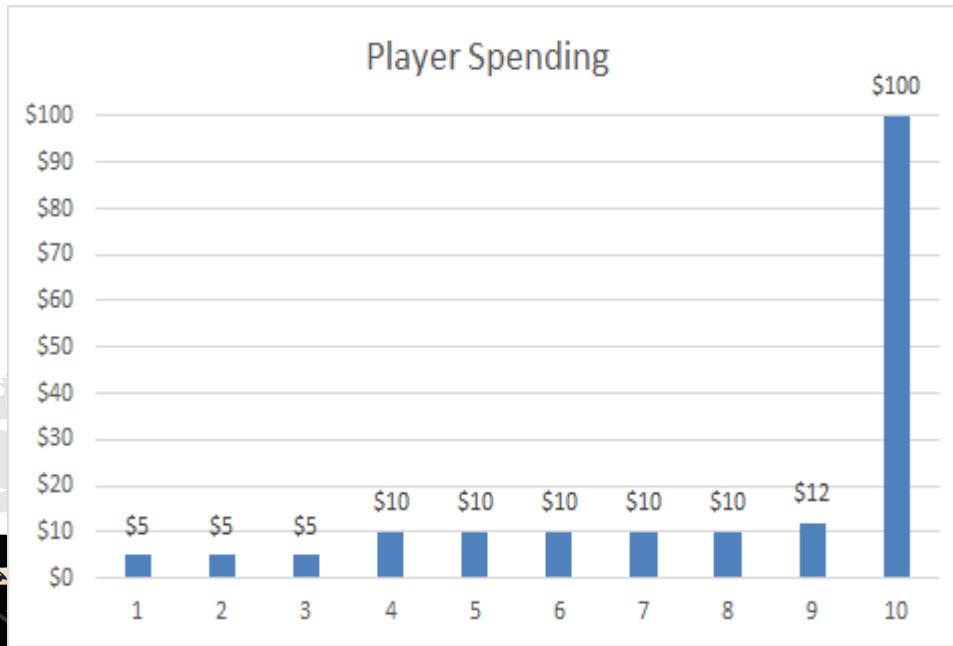- CaC (or CPI) vs. LTV is the key equation in paid gaming

Attribution

- Where the users come from

- Vendors: Appsflyer, TUNE, Kochava, Adjust
  (Ad-X phasing out)

- Close the loop between Ad networks and post-installation
  analytics systems
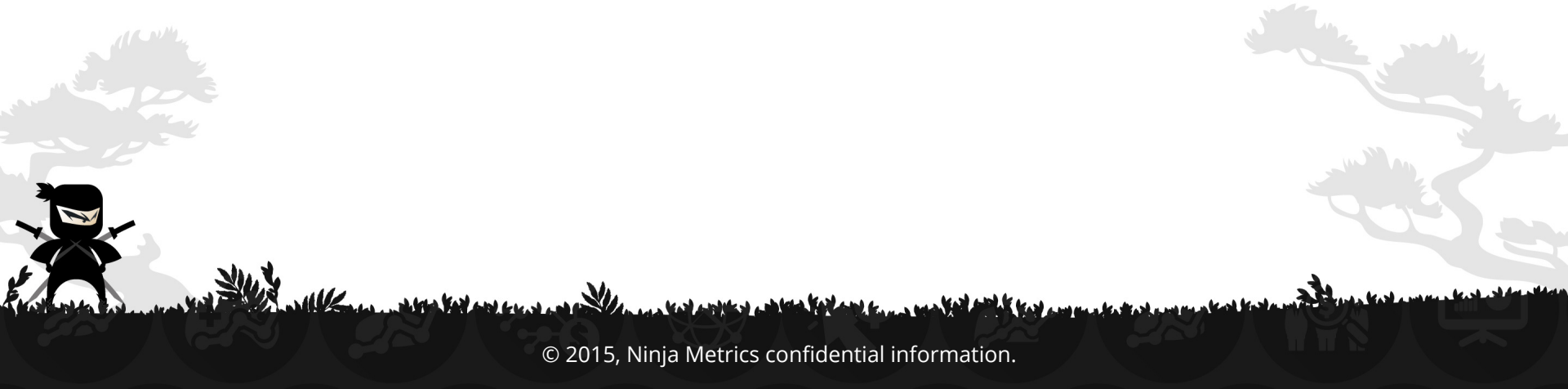
Understanding a distribution

Why an average is sometimes not a good metric, and why a SD and a Gini coefficient are super useful.
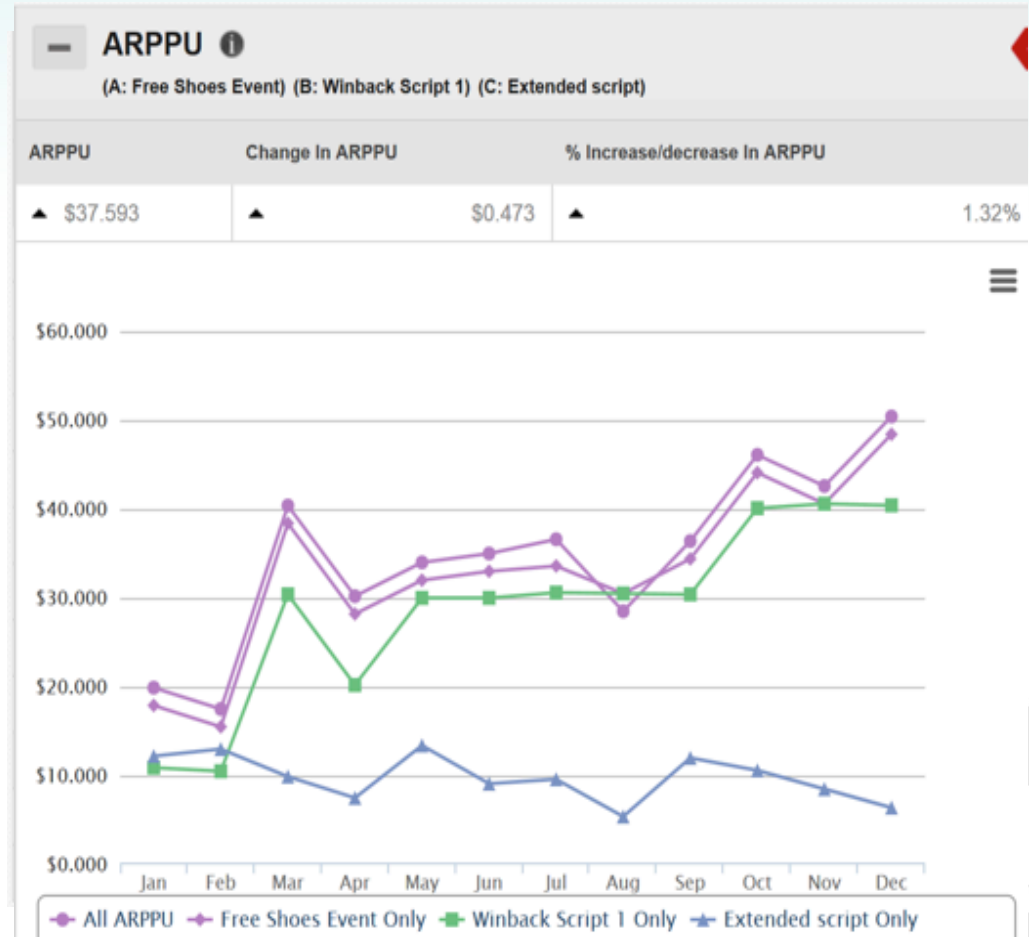

Average = $17
SD = $29
Gini = .52
Min = $5
Max = $100

Segmentation

By:

- Demographic group

- CRM event

- Region

- Platform

- AB Group

- Start Date

ARPPU ⓘ

(A: Free Shoes Event) (B: Winback Script 1) (C: Extended script)

ARPPU	Change In ARPPU	% Increase/decrease In ARPPU
▲ $37.593	▲ $0.473	▲ 1.32%

◆ All ARPPU   ◆ Free Shoes Event Only   ■ Winback Script 1 Only   ▲ Extended script Only

Cohort Analysis

Age, Period & Cohort

Amy Jo Kim's stages:
Visitor, Novice,
Regular, Leader, Elder

Stop judging me for playing as a female blood elf!

Modeling

No, data modeling

My Friends are Jealous ...

I Data Model!

GISNuts.com

What's in 201?

- Basics of machine learning vs. regression, interpreting MLMs

- LTV and churn modeling

- LTV vs. CaC

- Attribution & approaches, empirical benchmarks

- Network models and adjusting/accounting for social

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Statistics in 5 min

$$\hat{Y} = bX + a$$