https://github.com/wasadigi/Teaching-MSE-OpenSourceFrameworks

Open Source Frameworks (OSF) Introduction

Master of Science in Engineering (MSE)
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Agenda

- Introduction
- Organization & planning
- Evaluation

Open Source Frameworks 1.0

MSE | MASTER OF SCIENCE IN ENGINEERING

The Web — Open Source Software — Open Source Frameworks — The Java Ecosystem

1994 — 1998 — 2002 — 2006

Open Source Frameworks 1.0

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The Web | Open Source Software | Open Source Frameworks | The Java Ecosystem

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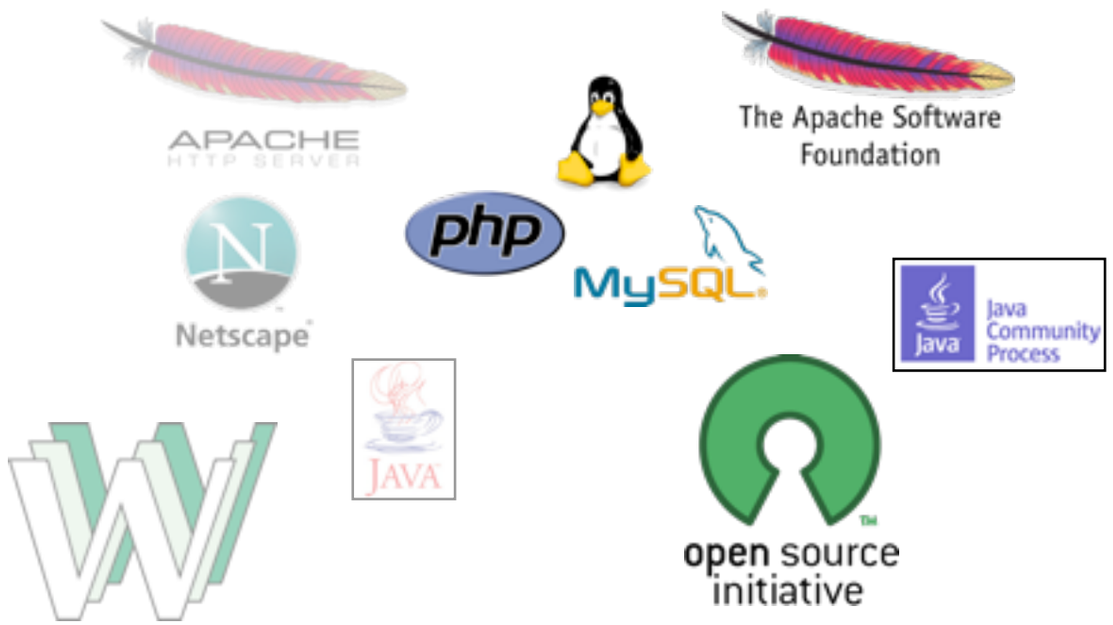
Open Source Frameworks 1.0



The Web — Open Source Software — Open Source Frameworks — The Java Ecosystem

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Open Source Frameworks 1.0

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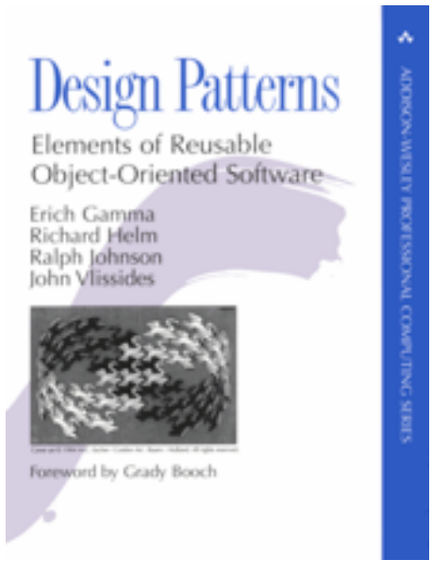
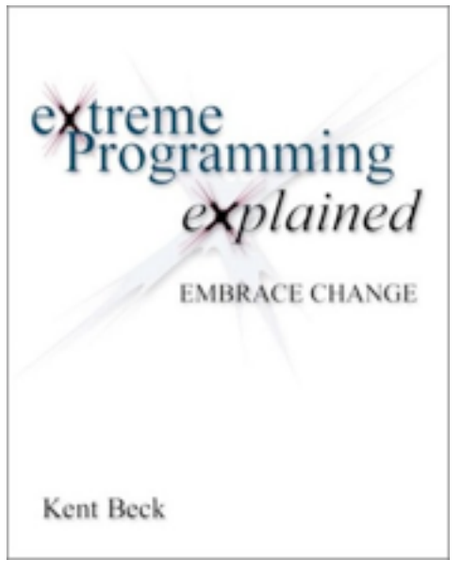
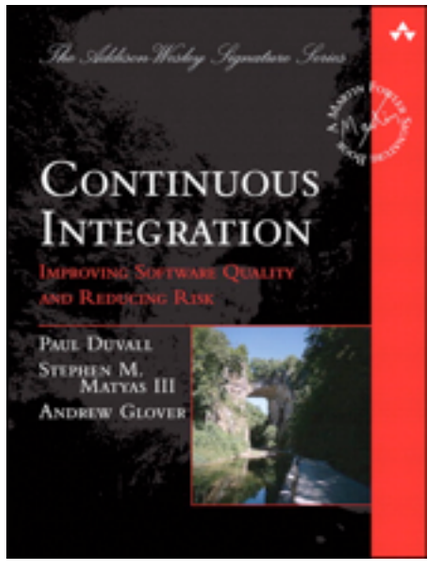
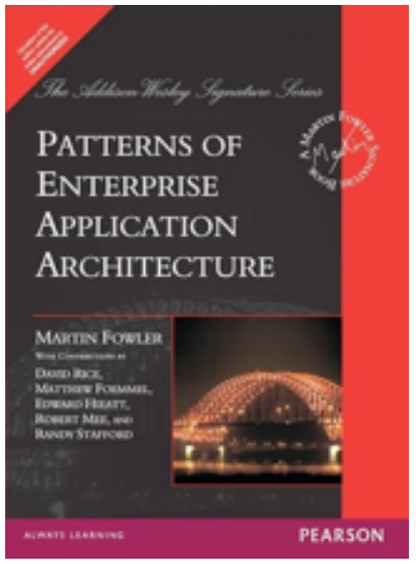
Open Source Frameworks 1.0

"The Enterprise App Environment"









Object Oriented Programming

Agile Methodologies

Automated Software Construction

Enterprise App Platforms & SOA

1994

1998

2002

2006

Open Source Frameworks 2.0

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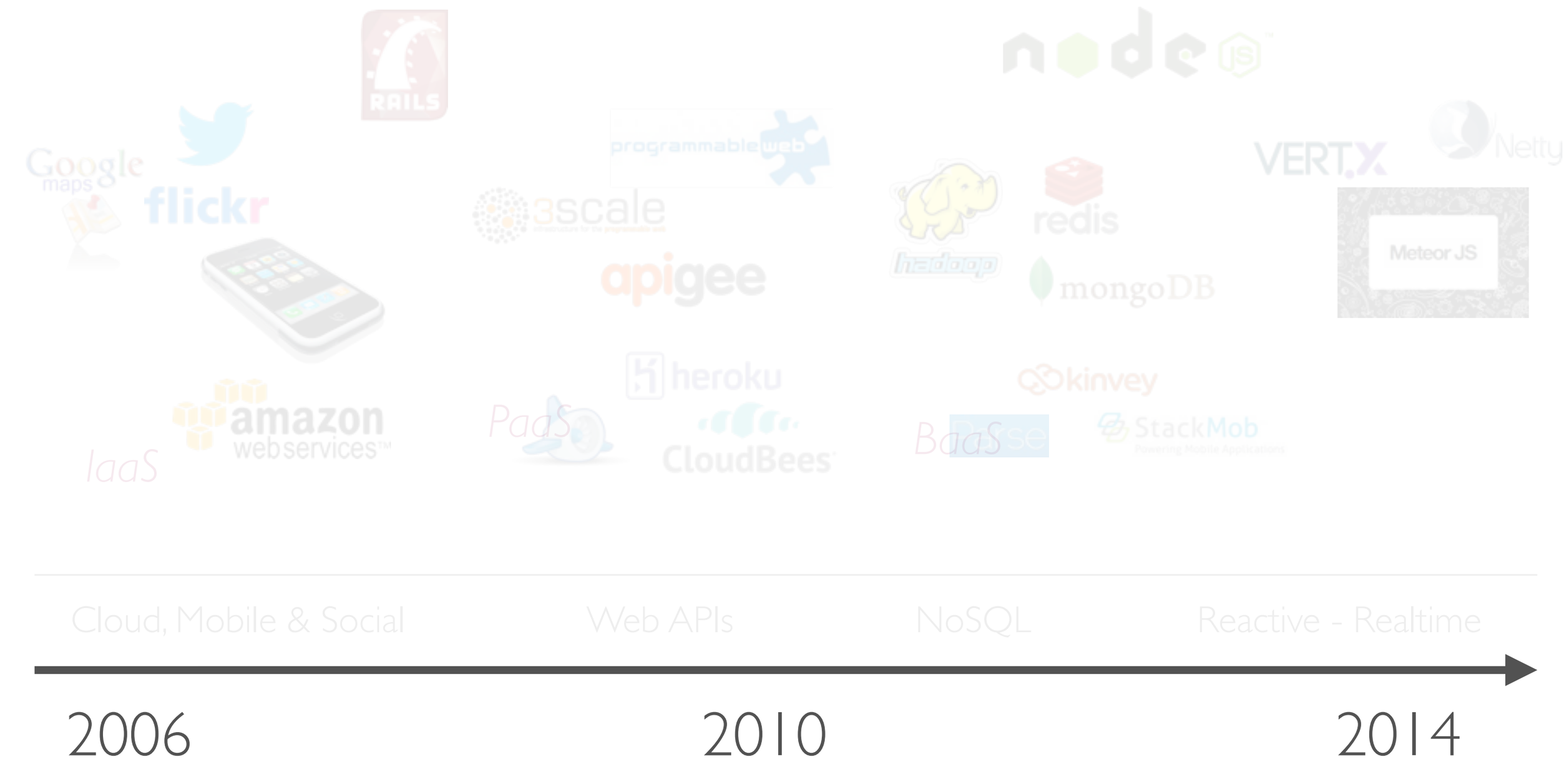

Open Source Frameworks 2.0

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Cloud, Mobile & Social — Web APIs — NoSQL — Reactive - Realtime

2006 — 2010 — 2014

Open Source Frameworks 2.0

MSE | MASTER OF SCIENCE IN ENGINEERING

Cloud, Mobile & Social — Web APIs — NoSQL — Reactive - Realtime

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Open Source Frameworks 2.0

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IaaS

PaaS

BaaS

Cloud, Mobile & Social | Web APIs | NoSQL | Reactive - Realtime

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Open Source Frameworks 2.0

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IaaS

PaaS

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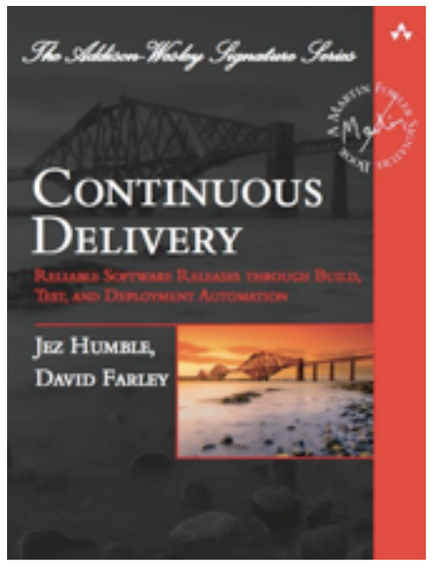
Open Source Frameworks 2.0

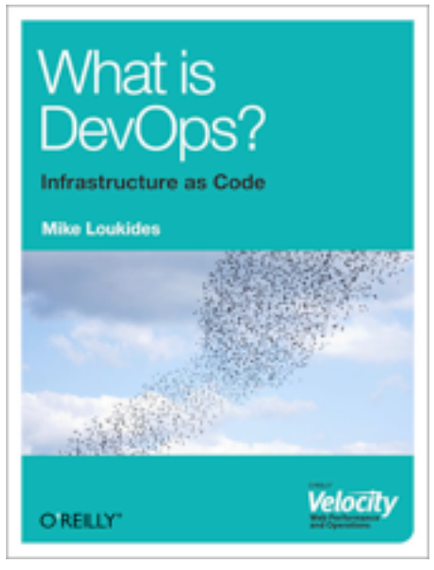
"The Modern App Environment"

RESTful Architecture

Lean Startup



Automated Software Deployment



DevOps

2006 2010 2014

"The Modern App Environment"

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- Supports and enabled by agile & **lean** principles
- Takes advantage of "**The Clouds**" (scalability, elasticity and manageability)
- Uses (REST) **APIs** as the glue to build apps from services
- Enables services accessed at anytime, from anywhere (**mobile**, **WoT**)
- Puts an emphasis on data (**analytics**)
- **Polyglot** (programming languages, data stores)

Objectives

- Get an overview of the Java Enterprise Edition (**Java EE**) platform.
- Understand the **core concepts**, **technologies** and **related frameworks**.

- Explore **emerging javascript frameworks**, both on the server and client sides.
- **Identify the distinctive features** of selected frameworks. Be able to **explain** these features and why they are **relevant** in a given context.
- **Apply the frameworks and build a system**. Validate and **demonstrate** the previously described distinctive features.

Code. A lot.

The Gamification Project

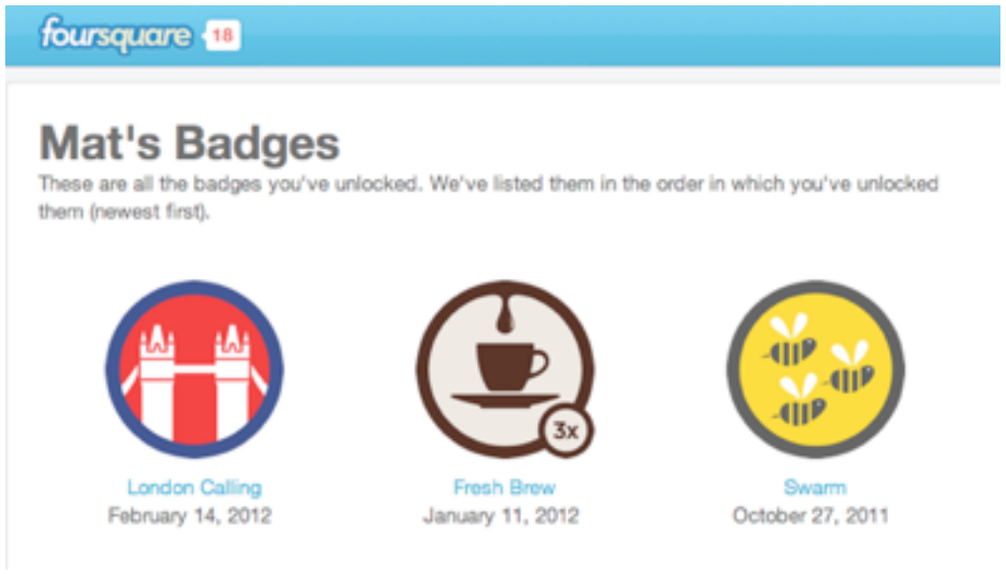
What is Gamification?

"Gamification is the use of game-thinking and game mechanics in a non-game context in order to engage users and solve problems.

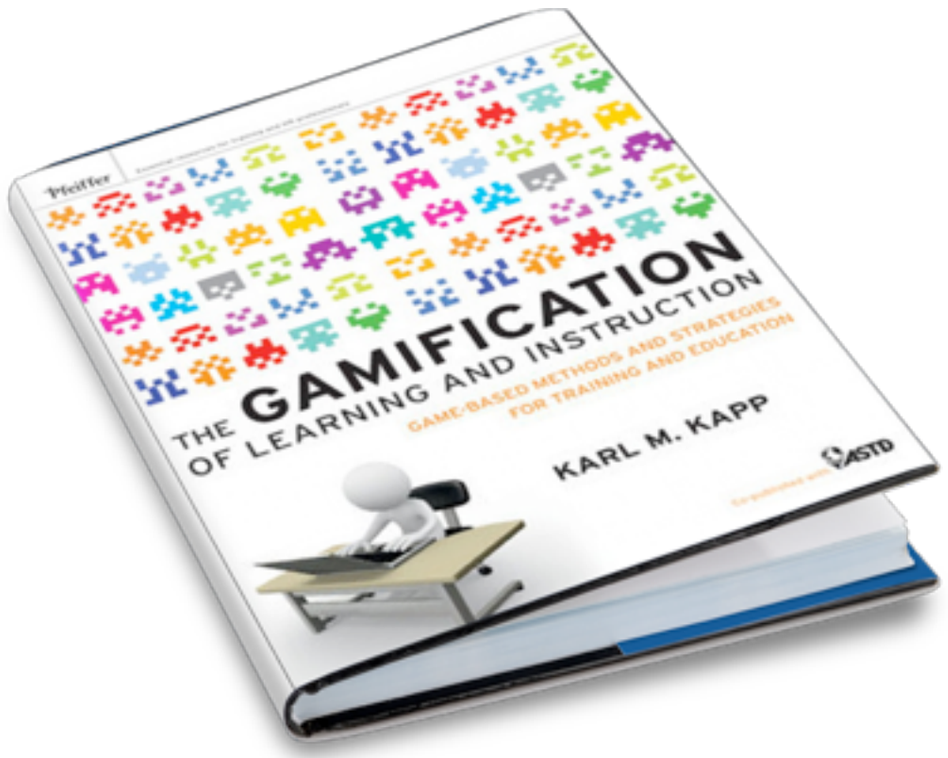
Gamification is used in applications and processes to improve user engagement, ROI, data quality, timeliness, and learning."

Examples


stackoverflow
433 Reputation
top 44% this month
+25 Chat application using jms spring and activemq queue
+5 Is there a way to integrate the S3's ACL with my own user reposit...
-2 What is dependency injection?
+5 What version of ember.js should I use for my project?
view more

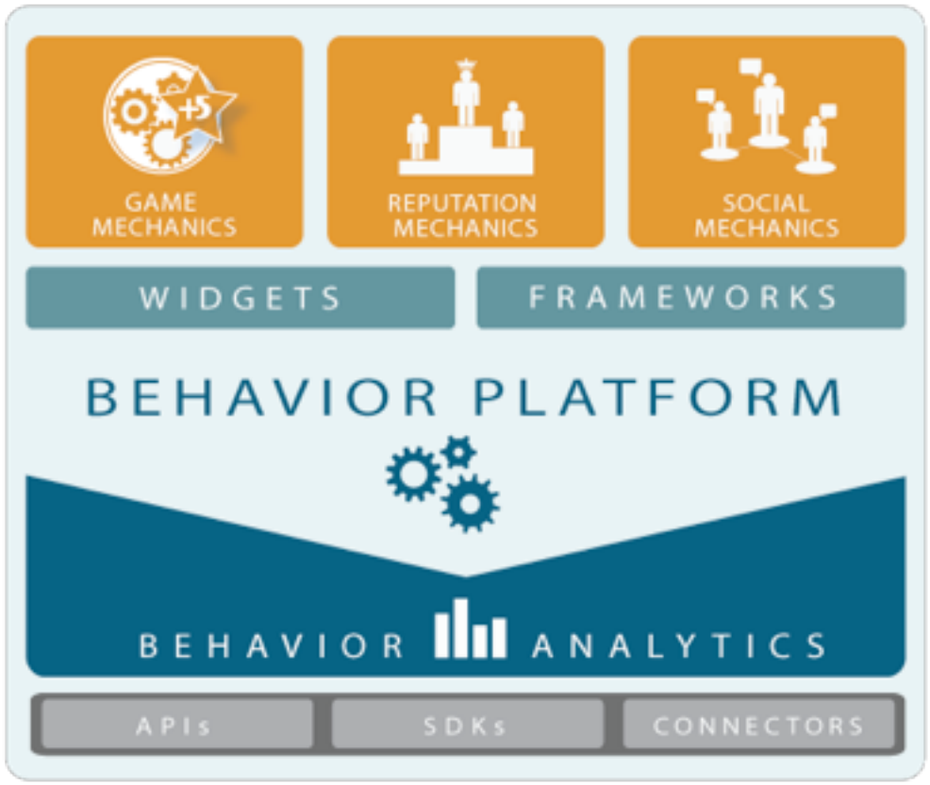

foursquare 18
Mat's Badges
These are all the badges you've unlocked. We've listed them in the order in which you've unlocked them (newest first).
London Calling
February 14, 2012
Fresh Brew
January 11, 2012
Swarm
October 27, 2011


htc
Welcome back, Christine
Food
Activity
Weight
Activity
Food
Bicycling
540

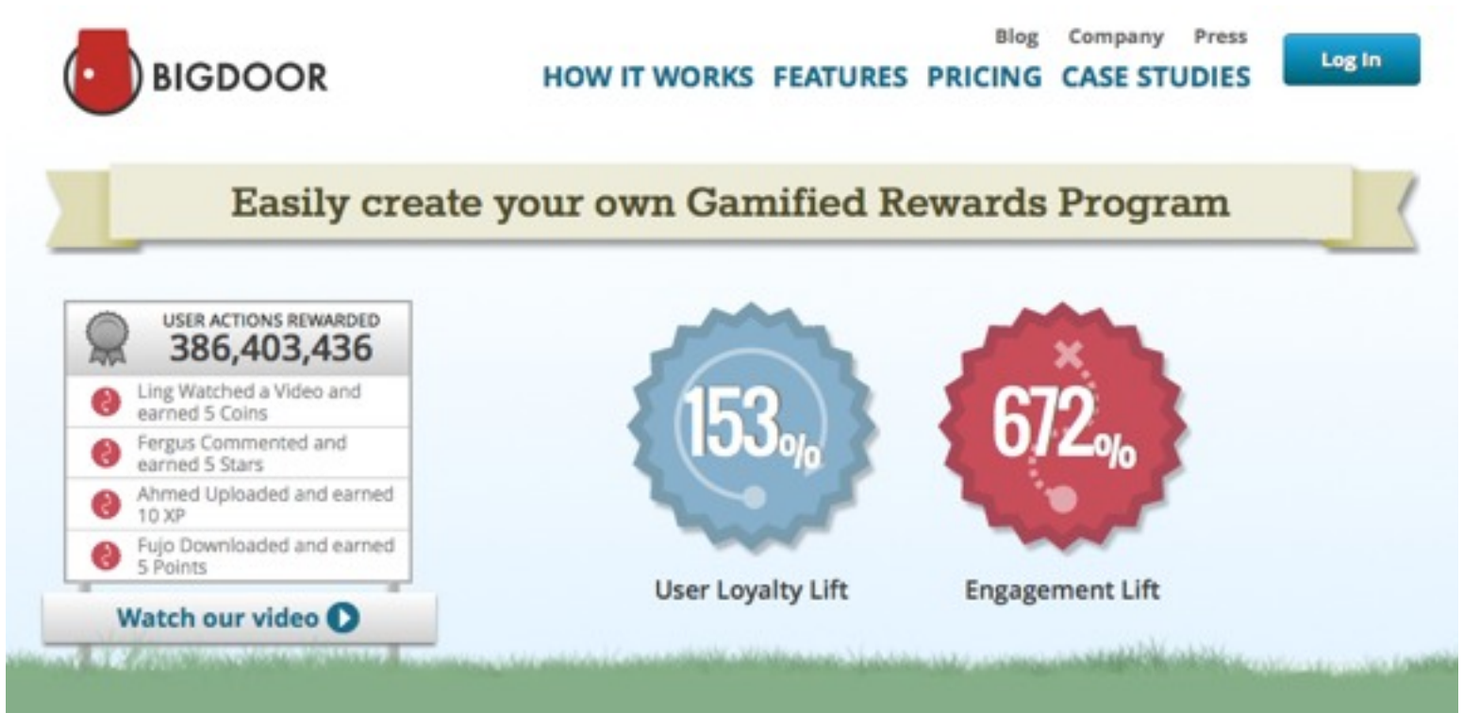

THE GAMIFICATION OF LEARNING AND INSTRUCTION
GAME-BASED METHODS AND STRATEGIES FOR TRAINING AND EDUCATION
KARL M. KAPP

Gamification Platforms

Badgeville



BUNCHBALL
THE LEADER IN GAMIFICATION



Planning

Date	Java EE Frameworks	Gamification Project
23.09.13	Intro, Java EE Overview, EJBs	Environment setup 1
30.09.13	REST APIs & JAX-RS	Environment setup 2 (automation)
07.10.13	Design and document a REST API for your gamification engine	
14.10.13	Persistence with JPA	Test and implement your REST API
21.10.13	Break	
28.10.13	Test and implement your REST API	
04.11.13	Spring Framework	**Presentations & demos**
11.11.13	Technical POC Project: Define the scope & plan the activities	
18.11.13	Technical POC Project: Build the reference system	
25.11.13	Technical POC Project: Build the test infrastructure	
02.12.13	**Technical POC Project: Present the results (with a demo)**	
09.12.13	Introduction to Javascript frameworks	Get ready with node.js & express
16.12.13	Re-implement your REST API in Javascript	
23.12.13	Break	
30.12.13		
06.01.14	Re-implement your REST API in Javascript	
13.01.14	Java Message Service	**Presentations & demos**

Evaluation

- **Teams**
  - Create all of your content (projects, code, documentation, slides) in a Github repository.
  - You can create teams of **at most 4 students.** Please register on https://github.com/wasadigi/Teaching-MSE-OpenSourceFrameworks/wiki/Teams-%282013-2014%29
- **Project (40%)**
  - Gamification API in Java EE (40%)
  - Technical POC project (40%)
  - Gamification API in Javascript (20%)
- **Exam (oral, 15 minutes): 60%**
  - You must be able to answer detailed questions about your projects (not only the part you have worked on!)
  - You must be able to compare the frameworks your team has used with the frameworks of other teams (every student presentation is exam material! interact with the presenters and take notes!)