CS Capstone Problem Statement

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eBay iOS eSports Application

CS 461 - Fall 2017

Prepared for

eBay Inc.

Luther Boorn — Luthe Boorn (Signature) — 10-19-2017 (Date)

Prepared by

Group 17
Skill Capped IRL

Will Sims — Signature — Date

Katherine Bajno — Signature — Date

Kiarash Teymoury — Signature — Date

Meagan Olsen — Signature — Date

Abstract

Our project involves creating an iOS application that utilizes eBays public APIs to help understand the eSports market and shopping opportunities. Our challenge is to target millennial gamers and connect to a variety of different APIs. The eBay public buying APIs will allow users to search for and purchase eSports merchandise within the application. There will be a social component that allows users to learn more about upcoming events by utilizing Twitter and Facebook APIs to display information from relevant eSports social media accounts. The app will be developed with the Swift programming language and Google Firebase will be used for implementing backend systems. The primary goal of the app is to make it easier for consumers to purchase eSports merchandise and find information about upcoming eSports related events.

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1 Problem Definition

eBay would like to make use of recently released public buying APIs in order to explore the eSports market and target new customers, as they currently do not have any products that attract millennial gamers. On the market today there arent any known products that make it easy for eSports fans to find merchandise and receive updates about their favorite games. The existing solution involves visiting individual social media pages and sites, as there are few websites or applications that consolidate information about different eSports events. In order to purchase eSports merchandise, users need to navigate to the official website of game companies they are interested in, such as Riot or Blizzard. From there they need to visit the dedicated store page and begin the shopping process, which can be quite time consuming. Another issue is if a user follows a lot of games, it can be difficult to keep track of the various upcoming events. The focus of the iOS eSports project is to develop an application that contains useful information about eSports, such as upcoming eSports events and dates, and allows customers to purchase products on eBay relating to those upcoming events.

2 Proposed Solution

Our solution is to develop an iOS app that allows users to easily find eSports merchandise on eBay. We will utilize pre-existing Facebook and Twitter APIs to pull information from popular eSports social media accounts, such as Riot and Blizzard. The app will display upcoming eSports events and dates one week in advance so that users can find information in one central location. Along with the events and dates, merchandise relevant to the events sold by eBay will be advertised. The application will allow users to complete the entire shopping experience, allowing them to browse the relevant merchandise, add items to their cart, and complete the payment process. Users will also able to search for specific eSports merchandise that is being sold on eBay, as we will create different queries to filter the results. The solution will be programmed in Swift and will include a login system implemented using Google Firebase. Any user can download the application and register for an account for no cost. We will have a significant amount of freedom over the design of the interface and the social media aspect during the creation of the application. This will be tweaked depending on the amount of work that is required. The proposed solution is intended to make it easier to find information about eSports and attract millennial gamers to eBay. The final product will be available to the general public and deployed to the iOS app store.

3 Performance Metrics

Success will be determined primarily by our ability to implement the functionality discussed in our initial meeting. The completion of project requirements is more important than raw performance. Therefore, most of our performance metrics will be qualitative requirements. Our performance will be measured by our ability to integrate with eBay APIs and Firebase. The application should also be able to display twitter feeds using Twitter's API, and utilize the Facebook API to gather eSports event data such as dates, details, and locations. We will also be evaluated on our ability to create a functioning application that authenticates users who log in and allows them to search for eSports merchandise that is actively being sold on eBay. Searching will involve using different queries to fetch results and return eSports merchandise from the eBay database. Users must be able to successfully complete the checkout process. The checkout process consists of the user being able to add items to their cart, verify the items contained in their cart, and finalize

their purchase by going through the payment procedure. The performance will also be measured by our ability to follow current human interface guidelines detailed in the Apple developer documentation.

There will be less of an emphasis on backend performance metrics because gated networks can make it difficult to measure performance accurately and we will be limited by factors outside of our control. The goal is to have all pages load within 2 seconds, but metrics may be tweaked in the future to avoid being overly ambitious on performance. The intent of our project is to learn about native app development and integrate with eBay APIs, not on creating a polished application. The performance metrics are expected adjust as the project progresses.