

# CS CAPSTONE PROBLEM STATEMENT

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## EBAY IOS ESPORTS APPLICATION *CS 461 - Fall 2017*

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### 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 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 functionality. 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 buy APIs in order to explore the eSports market and target new customers. Currently, eBay isn't does not have any products that attract millennial gamers. The focus of the iOS eSports project is to develop an application that contains useful information about eSports and allows customers to purchase products on eBay. There aren't any known products on the market that make it easy for eSports fans to find merchandise and receive updates about their favorite games. In order to purchase eSports merchandise, users need to navigate to the official website of game companies you are interested in such as Riot or Blizzard. From there, they are needed to visit the dedicated store page and begin the shopping process which can be quite time consuming. If users follow a lot of games, it can also be difficult to keep track of upcoming events. The existing solution involves visiting individual social media pages and there is no well-known website or application that consolidates information about different eSports events.

## 2 PROPOSED SOLUTION

Our solution is to develop an iOS app that allows users to easily find eSports merchandise on eBay and displays targeted social media updates. Facebook and Twitter APIs will be utilized to pull information from popular eSports social media accounts. The app will display upcoming eSports events and dates so that users can find information in one central location. The merchandise pulled from eBay will be relevant to the events that are being advertised and customers will be able to go through the entire shopping experience within the application. Users will also be able to search for specific eSports merchandise that is being sold on eBay and we will create different queries to filter the results. The solution will be programmed in Swift and it will include a login system implemented using Google Firebase. It will be free for anyone to register an account and download the application. We will have a significant amount of freedom over the design of the interface and social media functionality may be tweaked depending on the amount of work 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. Our performance will be measured by our ability to integrate with eBay APIs and Firebase. Depending on the requirements, integrating with Facebook and Twitter APIs is a possible performance metric as well. We will also be evaluated on our ability to create a functioning application that authenticates users who login and allows them to search for eSports merchandise that is actively being sold on eBay. 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. Our client has made it clear that the successful completion of project requirements is more important than raw performance and for that reason, most of our performance metrics will be qualitative requirements. Performance will also be measured by our ability to follow current human interface guidelines detailed in the Apple developer documentation. The intent of our project is to learn about native app development and integrate with eBay APIs. The focus is not on creating an extremely polished application and performance metrics are expected to be further developed as the project progresses.