Ryan D'souza

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List of Projects & CS Experience

My name is Ryan D'souza and I'm currently a Senior at Princeton High School (Princeton, NJ). I'm interested in Computer Science, specifically Artificial Intelligence, Natural Language Processing, and Machine Learning.

Work experience:

- Javelin Capital Markets LLC – Paid Intern (60hr/week) (Summer 2014)
  - Trading platform for Interest Rate Swaps in NYC
  - Software Engineering Intern (see resume for details)
- Present – Android Developer (Spring – Fall 2014)
  - Princeton Tiger Labs backed start-up
  - See resume for details
- FireStop – Quality Assurance Tester (Spring – Fall 2014)
  - Princeton University e-Lab backed start-up
- Trenton Kebab House - Web designer and social media manager (2011 – 2013)
  - Restaurant in Trenton

Classes outside of School:

- Java for Business Applications (Mercer County College, 'A')
- Princeton University Algorithms I (Coursera, Observer)

Brief Summary of apps created:

- **Stock Calculator –** Java Desktop GUI and Android Application
  - Parses Nasdaq Exchange to get real time quote of a stock the user enters (as opposed to 15 minute delay that other apps give)
  - Uses an algorithm that takes into account the company's P/E, Beta, Financial Sheet, Balance Sheet, Income Statement, and historical trading data to determine if it is a good buy
- **File Manager –** AppleScript application
  - Prompts for the assignment title (type it in) and name of the class (button choice)
  - Automatically opens a blank document in Microsoft Word, writes name, the current date, the class name, the class period, and the assignment title in bold
  - Saves the document in the respective class Dropbox folder with the assignment title as the file name
- **QEventShare –** Android Application
  - Streamlines adding and sharing events by allowing events to be created and shared via QR Code
- **PHS PowerSchool –** Android Application: github.com/dsouzarc/PHSPowerSchool
  - Allows one to view grades faster by automatically logging the user in and opening the grades home page
  - Calculates both the weighted and unweighted GPA
  - Unique feature to select multiple assignments and copy them to the clipboard

(useful for making a To-Do list)

- **App Searcher –** Android Application: github.com/dsouzarc/appsearcher
  - Similar to the iOS search bar, but for Android (because Android doesn't have one)
  - Shows a list of all the installed apps faster and with less memory than similar apps on the Play Store
  - Open it via the Notification Bar or a chat head that can be moved around the screen
  - Sort list of apps by either use or name
- **Prom Me –** Android Application
  - Concept of Tinder, but for Prom
  - Users can view other people's Facebook profile pictures and decide if they would want to go to prom with them. If two people choose each other, they are notified
  - Proof of concept: will not be released
- **Shopder** – Android, Google Glass, iOS, and Web application
  - User chooses a near-by store and enters their shopping list. Their shopping list is returned with an aisle number for each item
    - Items can be added to the shopping list by scanning the item's bar code
  - Store receives shopping list from user and can send targeted advertisements to user
    - Ex. Shopping List Item: 4 boxes of brownie mix. Store Advertisement: Buy1 dozen eggs, get the 2nd dozen free. Logic: Eggs are needed to make brownies
  - User can view shopping list on Google Glass, iOS, or Android application
- **Pitch Counter –** Android and iOS Application: github.com/dsouzarc/pitchcounter
  - League laws place a maximum limit on the number of pitches by a pitcher
  - Pitch Counter allows the coach to make a list of pitchers, add games for each pitcher, and in each game, put the number of Strikes and Balls the pitcher made
  - Coach can view players by number of pitches or their ratio (Strikes / total pitches)
- **Keyboard Scrambler –** Android app: github.com/dsouzarc/keyboard_scambler
  - Fun game that makes the user type a series of words with a scrambled keyboard
  - Three levels and thousands of possible words (obscure, but legit words)
- **Pacman –** Java GUI github.com/dsouzarc/pacman
  - Classic game
  - Brown University CS 015 Final Project
- **Bring Me Food** – Android and iOS Application (Freelance work)
  - Client orders food to be delivered to an address using either the iOS or Android app (similar to Uber)
  - Drivers (the friend and the friends of the friend who wanted the service) receive the order via a driver iOS/Android app, claim the order, get the order, and drop it off at the client's address.
  - Driver sends updates along the way
  - In essence, a refined version of Uber for crowd-sourcing food delivery
- **PHS Lab Days –** Service: github.com/dsouzarc/PHSLabDaysAndroid
  - Sends text messages on lab days to students who sign up for it.

    - Currently sending text messages to over 10% of the student body daily
    - Signup link: tiny.cc/phsLabDays
- **Facebook Message Analyzer** – Android Application: github.com/dsouzarc/fbma
    - Analyzes a user's Facebook messages in private chats and group messages (last 5000 messages)
    - Shows the word used the most often, average response time, and average word and sentence length
    - Shows the time intervals throughout the day when a user responds the quickest and writes the most
    - In implementation under guidance of a Princeton University professor: using Natural Language Processing to understand how a user's emotions change throughout the day and week