Jack Lucas Carlson
Trevor Day School New York, NY
DOB: 12/7/1994

Luke Carlson's
Code Samples and Explanations

Below are three projects I built in the past several months. One is a Python script made during my summer internship with Appboy, the other is a game designed for a 48-hour hack-a-thon at OnSwipe, and the last is a short description of my website.

CrunchBase Company Finder

The following is a Python script I made for Appboy (www.appboy.com) that pulls information from CrunchBase, a database of technology companies, and discovers businesses of a specific type, such as startups focused on mobile applications. Appboy uses this script to find specific companies that match the target demographic for their flagship product. After identifying businesses, the script uses the CrunchBase API to find more information on the company like phone number, email address, and company type. The information is exported as a CSV file that can be opened in Excel.

I have released the script as open-source at the following link:
https://github.com/jLukeC/CrunchBase-Company-Finder

Code Excerpts

Terms

```
term_list = ["mobile", "app", "startup"]
```

List of search terms. You can add or remove any number of terms and the script will return different results and will have a new filename.

File Name

```
date = strftime("%d %b %Y %H:%M:%S", gmtime())
filename ="data/DATA" # file located in data folder
for i in term_list:
    filename+= i
    filename+= date #File name depends on search terms and the current time
    info_file = open(filename + '.csv', 'w')
```

Each file will be generated in a data folder and will start with the word 'DATA'. Next, Python iterates through the array and adds each search term to the file name. Lastly, the date is

appended to the end. Python then creates the file by 'opening' it as a .csv file with write permissions ('w'). If you would like to change the filename to just be 'results', for example, you could just remove this code and insert:

```
info_file = open('results.csv', 'w')
```

Pages
The CrunchBase API returns 10 results per page.

```
def get_info(p = 1)
```

This line means that the function get_info() will take 1 optional parameter: 'p' which stands for 'pages'. The default value is 1.

```
max_range = p + 1 # I added 1 because in range function the max value is not counted
  for i in range (1, max_range):
    page = str(i)
    search_url = 'http://api.crunchbase.com/v/1/search.js?query=' + query + \
    '&page=' + page
```

In this section, the script goes through a loop to obtain every specified page, returning 10 new results each iteration. Thus, get_info(5) tells the script to search 5 pages each with 10 results, returning 50 companies.

Obtaining The Company's Info

The main search through CrunchBase only provides a small amount of information, so I had to do another lookup for companies' detailed info.

```
max_range = p + 1
for i in range (0, 10):
  permalink = json_response['results'][i]["permalink"]
  namespace = json_response['results'][i]["namespace"]
  company_url="http://api.crunchbase.com/v/1/" + namespace + "/" + permalink + ".js"
  company_response = urllib2.urlopen(company_url)
  json_company_info = simplejson.load(company_response)
```

The loop goes from results 0 to 10 in order to obtain all the results. The company's url is then constructed using their namespace, like 'company' or 'individual', and their permalink. CrunchBase then serves up a JSON file with all the necessary information.

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Who's That President?

In this game, users are shown a picture of a US president for three seconds and then have to choose the correct name from four options shown on screen. This project was designed for OnSwipe's 48-hour hackathon where the requirements were to create something for the web that can be used on both mobile phones and desktop computers. This script is written in Javascript and jQuery.

I have attached a code sample below and the game is also available at
http://whosthatpresident.herokuapp.com/

Full source for the game is located at https://github.com/jLukeC/president-game/blob/master/president_game/static/president-game.js

```javascript
$(document).ready(function(){
  $("#part1").hide();
  $("#part2").hide();
  var total_rounds = 0,
    correct_rounds = 0,
    correct_president = "no one";
    presidents = [
            //This is a 2 Dimensional Array of Presidents and their Images.
            //For the sake of brevity I only included 1 of the 44 presidents in the array
            ['George Washington',
'http://upload.wikimedia.org/wikipedia/commons/1/12/Gilbert_Stuart%2C_George_Washington_%28Lansdowne_portrait%2C_1796%29.jpg'],
    ];
  var chooseOption = function(correct_president_number){
            var correct_option = Math.floor(Math.random() * 3 + 1);
            $("#option" + correct_option).html(presidents[correct_president_number][0]);
            for (var i=1; i<5; i++) {
              var president_option = Math.floor(Math.random() * 43);
              if(president_option != correct_president_number){
                    if(i != correct_option){
                      $("#option" + i).html(presidents[president_option][0]);
                    }
              }
            }
            $('#part2').fadeIn();
  };
  var startGame = function(){
            $('#part2').hide();
            total_rounds += 1;
            $('#welcome').fadeOut(function(){
              $('#part1').fadeIn();
```

```
            });
            president_number = Math.floor(Math.random() * 43);
            correct_president = presidents[president_number][0];
            $('#pic').html("<img id='president_pic' src='" + presidents[president_number][1] + "'>");
            $('#president_pic').load(function() {
        setTimeout(function(){
          $('#part1').fadeOut(chooseOption(president_number));
        }, 3000);
            });
    }


    $('#start').click(function () {
            startGame();
    });
    $('.choice').click(function () {
            if($(this).text() == correct_president){
                correct_rounds += 1;
            }
        $("#score").html(correct_rounds + " out of " + total_rounds);
        startGame();
    });
});
```

My Own Website

I recently created a dynamic website from scratch. I am proud that I was able to pull together multiple tools and languages effectively without using any templates or "off the shelf" programs. After designing the pages of my site using HTML/CSS and Javascript, I used Django as a web framework, and some Python, to build site components such as a blog. I deployed my website onto Heroku, a cloud platform, with git version control. Since Django's default server is only semi-reliable for a production setting, I learned how to use a WSGI server called gUnicorn so my site can handle thousands of hits without crashing.

My site is located at: http://www.jlukecarlson.com/