# JOSEPH DANIEL ZOLAND

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### **PROFESSIONAL SUMMARY**

## Languages:

JavaScript Python Swift 3

### Front-End Development:

CSS3 HTML5

## Frameworks:

AngularJS Core Motion Core Data Django Flask Node.js SpriteKit

### Libraries:

JQuery Express Mongoose.js Pandas Socket.IO

#### Databases:

NoSQL (MongoDB) SQL (MySQL, SQLite)

### Methodologies:

CRUD Operations OOP MVC

### Other Technical:

Atom AWS Git GitHub Xcode

### Miscellaneous:

GoogleScholar ProQuest PsychoPy Qualtrics SPSS Web developer with knowledge of Python, MEAN, and iOS. Experience developing applications, from concept development through completion. Willing to relocate if a position is an excellent fit for interests and skill set.

In the past, worked primarily as a project director and as an instructor. Very experienced in research methods, psychology, statistics, and education. With the aid of a collaborative team, eager to confront and overcome new challenges while developing exciting new applications.

## POTTY PAL (MEAN/JavaScript)

- Collaborated in a team of five developers to build a MEAN Stack web application, for the purpose of notifying students of a campus whether or not a bathroom stall is available in their local restroom.
- Utilized a Raspberry Pi and Python scripts to manually send messages to update page (simulating the final product, see below).
- Future directions: Hook up an infrared sensor to the stall lock.
  When the lock is turned, the Raspberry Pi will notify the webpage
  that the relevant stall is "Occupied;" otherwise, it will be "Vacant."
  Record metrics for analyses (e.g., peak usage times).

# **TETRIS NATURES (iOS/Swift 3)**

- Used SpriteKit to create a game where blocks are moved to make matches, similar to Bejeweled. This was a solo project.
- Created all of the sprite textures using free online software called Piskel; game music and sound effects were borrowed.
- The game implements an advanced pattern-matching algorithm that runs on a fixed time interval to determine if there are matches: For example, the algorithm can determine if there is a match of three vertically and a match of three horizontally (e.g., "L" shape). Upon determining a match, the game uses a sound effect to notify the player and deletes the matching blocks; by using SpriteKit's gravity functionality, the remaining blocks then fall into place.
- The aforementioned functionality was created within just one week.
- Future directions: Create multiple levels with clear requirements and a scoring system. Implement multiplayer functionality. Develop special abilities (e.g., activate an ability to automatically eliminate all green blocks on screen).

## AQVA (iOS/Swift 3)

- Utilized SpriteKit to mimic the functionality of the classic water ring game; collaborated in a team of five developers.
- The game spawns several rings on the screen, as well as several hoops. The user can tap the buttons near the left and right bottom corners of the screen to activate bubble jets that propel the rings upwards, and then tip the device to navigate the falling rings into the hoops (i.e., utilizes Core Motion framework).
- Primary responsibility was collaborating with another member to write the code for the project. Secondary responsibility was to communicate with all members to ensure collaborative efficiency.
- This project tied for second place in a Coding Dojo Hackathon.

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### **EDUCATION**

# SAN JOSE STATE UNIVERSITY

San Jose, CA Master of Arts, Psychology, December 2013

- Thesis: "Attention Restoration Theory in Gaming as it Pertains to Subsequent Academic Learning"
- Presented thesis at Western Psychological Association Conference in 2013
- Awarded Frank D. Payne Memorial Scholarship; 4.00 GPA

# SAN JOSE STATE UNIVERSITY

San Jose, CA Bachelor of Arts, Psychology, May 2011

> Graduated summa cum laude; 4.00 SJSU GPA

### **TECHNICAL TRAINING**

#### **CODING DOJO**

San Jose, CA

# **Triple Black Belt Certificate of Completion** 05/2017

- · Studied the Python, MEAN, and iOS stacks
- Completed 1000 hours of instruction within a very intense curriculum
- Obtained the highest honor upon graduation, "Triple Black Belt", which requires the creation of a near-perfect representation of a webpage from a wireframe in less than 4.5 hours, for each of the 3 stacks

### RESEARCH EXPERIENCE

### **SOCRATIC TECHNOLOGIES**

San Francisco, CA

# Research Assistant - Project Director 03/2015-12/2016

- Achieved promotional advancement through highly successful
- management of all stages of numerous projects

  Trained both peers and superiors in the usage of SPSS, Excel, etc.
- Spearheaded the company's movement towards Python/Pandas
- Annotated the 300+ item change log and wrote the 2200+ lines of SPSS syntax for a high-profile survey

### **TEACHING EXPERIENCE**

# **FUN & EDUCATIONAL CLUB**

San Jose, CA

#### Chess Instructor

10/2014-11/2014, 09/2008-08/2011

- Independently retained control of 14 children, largely kindergartners, in a fast-paced setting
- Simultaneously taught and supervised diverse student groups

### **TUTORING CLUB**

Los Gatos, CA

### **Tutor**

07/2011-06/2012

- Prioritized students' needs in groups of 3 via sound judgment
- Fostered effective working skills via psychology background