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MICHAEL E. SPEARMAN

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TECHNICAL SKILLS

Languages

- Objective-C, C++, C, Java, CSS, HTML

Tools and Frameworks

- Git, Xcode, Eclipse, JUnit, UNIX, OS X Command Line, Axure

EDUCATION

University of British Columbia **Vancouver, BC** ***Sept 2012 – May 2017***
Major: Computer Science In-major GPA: 3.5

Undergraduate Coursework
Relational Databases, Algorithms and Data Structures, Network Computing, Human-Computer Interaction, Software Construction, Computer Systems, Introduction to Strategic Interaction, Induction and Decision Theory

PROJECTS

Personal Projects - View more projects at **www.github.com/blasian**

Location Alarm ***Jan. 2014 – Present***

- **iOS** application that allows users to set location based alarms.
- Alarm settings (radius, location) are customizable and alert user when entering and/or exiting the radius of a designated location.
- Uses CLGeocoder to convert searched addresses into longitude and latitude coordinates.
- CoreLocation and MapKit frameworks are implemented to track and display user location.
- Alarm interface designed for intuitive user interactions (dragging alarms to relocate position and using map overlay to display alarm radius).
- Future implementations will allow the creation of multiple alarms and will add views for changing alarm setting and displaying all alarms.

Flash Card ***Dec. 2014***

- **iOS** application allowing users to create flash cards that can then be used as study aids.
- Implements the singleton design pattern to coordinate data access across multiple views.
- Interface provides intuitive user controls: swiping left/right for next/previous cards; tapping card to view other side.
- Dynamically organizes cards into “correct” and “incorrect” sections based on users ability to correctly identify card.

Simon Says ***Dec. 2014***

- **iOS** application that requires the user to memorize and repeat a flashing pattern of random colors.
- Adds another random color each time the user can replicate the pattern.
- Uses a finite-state design to interpret current state and determine appropriate action.

E-Commerce Textbook Marketplace ***Dec. 2014 – Present***

- Craigslist-like website that will serve as a connection point for students that wish to buy or sell their textbooks. Implementing using **Ruby on Rails** for front and back end development.

UBC Course Scraper ***Aug. 2014***

- **Python** script crawls UBC course registration website and then uses BeautifulSoup library to parse HTML document for computer science course information.
- Implements stack data structure to efficiently manage unvisited links.
- Formats course data (instructor, time, class type, etc.) into readable format and writes to .txt file.

SoundMap ***Dec. 2014***

- **JavaScript** program that visualizes locations of recent SoundCloud uploads on a map.
- Uses SoundCloud API to retrieve data and Google Maps API to visualize.
- Geocodes track location using Google Maps geocoding API.

Online Portfolio ***Dec. 2014***

- Personal website created with **HTML** and **CSS** to host my interactive personal projects.
- Twitter Bootstrap used for design and structuring of HTML contents.

Course Projects

Next Bus ***Mar. 2014***

- Required a partner and I to finish a half completed **Android** application that used the TransLink API to retrieve and display real time bus location data.
- Users can view bus arrival times, real-time bus locations and add bus stops to a list of favorites.
- Implementation included thorough testing of each class, retrieving and parsing XML data and displaying parsed data onto map.

Parallelism and Concurrency ***Nov. 2014***

- Implemented spin locks, blocking locks and semaphores to avoid deadlock in multi-threaded programs that required mutually exclusive access to data using **C**.

Data Structures and Algorithms ***Nov. 2014***

- Fully implemented data structures (hash tables, binary search trees, AVL trees, stacks, queues and linked lists) using **C++**.
- Developed algorithms that efficiently utilized these data structures.

Work Experience

Busser and Food Expediter **Portage Bay Café** ***May 2014 – Dec 2015***

- Handling several customer requests simultaneously
- Efficiently working in fast paced environment
- Working as a member of a team
- Paying attention to detail