B R I A N L Y U

(408) 600-8263 ▪ 7681 Palmilla Dr #6324, San Diego, CA 92122 ▪ brianlyu96@gmail.com

EDUCATION

University of California, San Diego– La Jolla, CA **Graduation: March 2018**

- Bachelor of Science, Computer Engineering **GPA: 3.49**
- Warren College Provost Honors
- Affiliations: Theta Tau (ΘT) – Professional Engineering Fraternity – Epsilon Delta Chapter

TECHNICAL PROFILE

- **Programming Languages:** C++, Java, SQL, HTML, CSS, JavaScript, Bash, AutoIt, SPARC
- **Software Tools:** PuTTY, Vim, Git**,** XCode, Android Studio, Eclipse, AquaData Studio, Microsoft Office
- **Personal Website:** http://brianlyu.github.io/

PROFESSIONAL EXPERIENCE

Programmer Analyst, UCSD School of Medicine **June 2016 – Present**

- Assisted in developing business software systems, web applications, and analytic reports for internal company operations.
- Built SQL queries with joins, grouping, and aggregations to manipulate and probe datasets from extensive databases.
- Wrote Bash scripts and integrated SQL queries using MySQL database to perform daily data analyses and validations.
- Wrote AutoIt scripts to test the functionality of web and software applications, while automating working status reports.

PROJECTS AND ACTIVITIES

Theta Tau FlagBot, Mechanical Robot **April 2016 – May 2016**

- Constructed a DC-Motor powered wheeled robot, capable of multidirectional movement and location awareness.
- Utilized an Arduino Uno to program the robot's movement, speed, and a flag waving mechanism for club advertisement.
- Paired the robot with an Android controller app, allowing wireless control of the robot via a HC-06 Bluetooth module.

Couple Tones, Mobile Android Application **February 2016 – June 2016**

- Developed a location-based Android application providing push notifications when user contacts visited certain locations.
- Employed the Google Maps API, where users could select a specific location on the map and pin it as a "favorite".
- Used JIRA for issue delegation, as well as Agile software development methods such as iterations, user stories and tasks.

C++ Programming Challenges **August 2015 – Present**

- Developed a file encoding/decoding program, implementing a binary trie and Huffman's compression algorithm.
- Built a dictionary autocomplete/spell check program using HashTables and MultiwayTries to predict words given a prefix.

Application Development Club **August 2013 – June 2014**

- Created a Java GridWorld interfaced game with KeyListener implementations to facilitate 8-way directional movement.
- Assisted in teaching peers Java OOD concepts and Android mobile application development using Android Studios.

Mandarin Language and Cultural Center **August 2012 – June 2014**

- Developed leadership and management skills in overseeing weekly lesson plans focusing on culture and linguistics.
- Tasked with designing and leading group activities and discussion sessions; 350 service hours accumulated.

RELEVANT COURSEWORK

Advanced Data Structures

- Case study analysis of approaches best suited to solving programming problems through Object Oriented Design in C++.
- Use and implementation of data structures with focus in memory management and best case efficiency.

Introduction to Computer Architecture

- Underlying design principles and comprehensive study of computer architecture, including processor and control design.
- Focused on computer system performance, including Instruction Set Architecture, pipelining, and memory hierarchy.

Software Engineering

- Software development methods focusing on Agile Software Process, Design Patterns, Refactoring, and OOD practice.

Components and Design Techniques for Digital Systems

- Studied the theoretical underpinnings of digital design, Finite State Machines and Sequential or Combinational Logic.