B R I A N   L Y U

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EDUCATION

University of California, San Diego — **Graduation: March 2018**

- **Degree:** Bachelor of Science, Computer Engineering — **Major GPA: 3.51**
- **Honors:** Warren College Provost Honors
- **Coursework:** Advanced Data Structures, Software Engineering, Computer Architecture, Design & Analysis of Algorithms

TECHNICAL PROFILE

- **Programming:** Java, C++, SQL/MySQL, HTML, CSS, JavaScript, Bash, AutoIt, Node.js
- **Software Tools:** PuTTY, Vim, Git, XCode, Android Studio, Eclipse, AquaData Studio, Microsoft Office
- **Concepts:** Agile Development, Software Design Patterns, UI/UX Design, Git Version Control

EXPERIENCE

Business Application Development Group, UCSD School of Medicine — **June 2016 – Present**
Programmer Analyst Intern

- 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 migrate datasets from extensive databases.
- Wrote Bash scripts and integrated MySQL queries to perform company data validations and database test checks.
- Wrote AutoIt scripts to test the functionality of web and software applications, while automating working status reports.

Unisound, SD Hacks — **September 2016**
Team Member

- Designed the frontend appearance and experience of a music app, in which multiple users can immediately collaborate on a group playlist by adding songs to a private queue room.
- Utilized Last.fm API for track searching and account information, and JSON to serialize data from the backend servers.

PROJECTS

FlagBot Mechanical Robot — **April 2016 – May 2016**

- Constructed a DC-Motor powered wheeled robot, capable of multidirectional movement and location awareness.
- Developed a mobile Android application to wirelessly control the robot via a HC-06 Bluetooth module.
- Employed Arduino Uno to program the robot's movement, speed, and a flag waving mechanism for club advertisement.

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

- Developed a location-based Android application, providing push notifications when contacts visited certain locations.
- Utilized 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.

Dictionary AutoComplete & Spell Check — **May 2016 – June 2016**

- Enhanced a C++ autocomplete/spell check algorithm designed to list out possible word completions for an input prefix.
- Implemented a Multiway Trie structure for efficient search and insertion, decreasing original prefix search time by 80%.

Application Development Group — **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.

EXTRACURRICULAR ACTIVITIES

Theta Tau, Professional Engineering Fraternity — **April 2016 – Present**

- Planned professional development and networking events for students during member recruitment, including resume workshops, mock interviews, and presentations from alumni within the engineering industry.

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

- Utilized leadership and management skills as assistant teacher in courses focusing on cultural and linguistic development.
- Tasked with designing weekly lesson plans, group activities, and discussion sessions; accumulated 350 service hours.