

BRIAN LYU

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EDUCATION

University of California, San Diego

Graduation: March 2018

Major GPA: 3.51

- **Degree:** Bachelor of Science, Computer Engineering
- **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 song 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.