

Nathan Tsai

Software Engineer | Hackathon Enthusiast

EDUCATION

University of California, Los Angeles | *Computer Science*

EXPECTED GRADUATION: JUNE 2019

GPA: **3.86**

EXPERIENCE

Software Engineering Intern | Novacoast

APRIL 2017 – PRESENT

- Develop a secure RESTful API and intuitive UX to store, manage, and query SOWs
- Technologies: Golang, Python, JavaScript, MongoDB, Box, DocuSign, Docker, Git

Mobile Developer | UCLA Library

JANUARY 2017 – PRESENT

- Design the official UCLA Library app that provides users with real-time catalog data
- Technologies: Swift 3, Alamofire, Google Maps SDK, Google Analytics, CocoaPods

Web Developer | Daily Bruin

JANUARY 2017 – JUNE 2017

- Transform research, data, and journalism into informative, user-friendly web pages
- Technologies: JavaScript, jQuery, Bootstrap, Mapbox, Handlebars.js, HTML, CSS

PROJECTS

Pocket Change | *Personal Finance App* [iOS]

<https://github.com/nwtsai/PocketChange>

- Constructed an iOS app with Swift 3 that allows a user to view, analyze, and manage their personal budgets by illustrating how much, when, where, and why money was spent
- Designed animated pie charts and bar graphs that plot transaction data for each budget over various time intervals, beautifully visualizing a user's spending history over time
- Utilized regular expressions for data validation by dynamically enabling or disabling buttons and limiting text field inputs to ensure data integrity, validity, and legitimacy

MarkItPlace | *E-Commerce Platform* [Web]

<https://github.com/nwtsai/MarkItPlace>

- Created a full-stack web application with JavaScript, providing an online platform for users to buy, sell, and search for items by interacting with geo-markers on a real-time map
- Devised filtering algorithms that allow users to find items by key word, category, price range, and location, displaying only the markers on the map that match the search criteria
- Reduced load time by leveraging already loaded elements, efficiently saving the current state of the page before transitioning to another view in order to avoid slow page refreshes

DataQuake | *Live Earthquake Data* [Web]

<https://github.com/nwtsai/DataQuake>

- Designed a web application with JavaScript that maps the location and size of earthquakes around the world, rendering circles with radii that correspond to their respective magnitudes
- Implemented a search bar that parses through the real-time earthquake data, plotting only the earthquakes at the specified location, magnitude range, or time frame on a resizable map
- Utilized Handlebars.js to automatically parse, structure, and style the data gathered from the USGS database, such as the timestamps, locations, and magnitudes of each earthquake

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SKILLS

Programming Languages

C++, Golang, Python, JavaScript, Java, Swift 3, C, Bash, Verilog

Relevant Coursework

Algorithms and Complexity [CS 180]
Machine Learning [CS M146]
Operating System Principles [CS 111]
Computer Networks [CS M117]
Design of Digital Systems [CS M51A]

Platforms

Docker, Github, Gitlab, Sublime, Box, DocuSign, Salesforce, Solidworks

Libraries | Frameworks

jQuery, WebGL, Handlebars.js, Bootstrap, Materialize.io

Markup Languages

HTML, CSS

IDEs

XCode, Android Studio, Microsoft Visual Studio, Eclipse

Languages

English [native], Mandarin [fluent]

AWARDS

Dean's Honor List

Scholastic distinction granted to UCLA engineering students who obtain a GPA of **3.7** or above and enroll in at least **15** units
[Spring 2016, Fall 2016, Winter 2017, Spring 2017]

AP Scholar with Honor

Granted to students who receive an average score of at least **3.25** on all AP exams taken, and scores of **3** or higher on four or more of these exams

Community Service Award

Awarded to students who have given at least **300** hours back to the community through volunteer work