

# Jonny Chow

📧 [jonniechow](mailto:jonniechow) | 917-862-0328 | [jonnyxchow@gmail.com](mailto:jonnyxchow@gmail.com) | Flushing, New York

## EDUCATION

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### UNIVERSITY OF MICHIGAN

*B.S. Computer Science*

Ann Arbor, MI

*Sep 2016 - Apr 2020*

#### Coursework:

- Introduction to Operating Systems (EECS 482)
- User Interface Development (EECS 493)
- Web Systems (EECS 485)
- Computer Security (EECS 388)
- Computer Organization (EECS 370)
- Data Structures & Algorithms (EECS 281)

## EXPERIENCE

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### J.P. MORGAN CHASE & CO. CODE FOR GOOD

*Hackathon Participant*

Chicago, Illinois

*Oct 2018*

- Created a web application for Out and Equal, a non-profit organization looking for a solution for people in the LGBTQ+ workforce to connect to resources and other people in the LGBTQ+ community
- Led a group of six members by assigning roles and dividing up tasks based on experience and skills
- Demonstrated the features of our web application to our client and dozens of JP Morgan technical employees
- Incorporated cybersecurity protocols by preventing SQL injections and cross-site scripting attacks
- Orchestrated use of Flask backend along with Adobe XD as a prototype for the frontend and deployed on Amazon Web Services using EC2 instance

### MEGA ACADEMY

*Teacher's Assistant*

Flushing, New York

*Jan 2015 - Aug 2018*

- Tutored 60 middle school students daily in math and literature
- Enforced rules to engage learning experience in the classroom environment
- Graded student work with attention to detail both quickly and carefully
- Assisted both students and parents with concerns and problems
- Provided training and leadership to new teacher assistants for maximum efficiency in work area

## PROJECTS

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### Thread Library

*Feb 2019*

- Worked together in a group of three to write a thread library following a FIFO scheduling order
- Implemented functions in the C++ thread, mutex, and conditional variable classes
- Designed code to thoroughly test how threads and monitors work on uniprocessor and multiprocessor systems
- Incorporated timer interrupts and inter-processor interrupts to be handled by the CPU
- Optimized CPU efficiency by minimizing number of calls to swapcontext and setcontext

### Wikipedia Search Engine

*Dec 2018*

- Created a search engine using information retrieval based on term frequency, inverse document frequency, and PageRank scores
- Designed an inverted index using map and reduce pipeline with Hadoop framework
- Used an index server REST API that handled search queries and returns a list of relevant results
- Created a second React driven GUI and a database for the search engine

### Map Reduce Python Server

*Nov 2018*

- Implemented a MapReduce single machine, multi-process, multi-threaded Python server
- Incorporated Master class to manage jobs, distribute jobs evenly among workers, and handle faults
- Created Worker class to register themselves with master, await commands, perform mapping, reducing, and grouping tasks based on instructions given by the master

### Instagram Clone

*Sep 2018*

- Pioneered an instagram clone implemented with client-side dynamic pages and a REST API
- Wrote a client application in JavaScript that runs in the browser and makes AJAX calls to the REST API
- Implemented using ReactJS with a MySQL database and deployed on AWS EC2

### Learning Log

*Jun 2018*

- Created a web application allowing users to log topics and create entries they learn about each topic
- Facilitates user experience by allowing addition of new topics, new entries, and ability to edit any response
- Implemented using Python, Django, bootstrap-3, jQuery, JavaScript, and deployed with Heroku

### Most Popular GitHub Repositories

*May 2018*

- Formulated a website that displays the most starred GitHub repositories using current data
- Called GitHub API to request data and used Python's Pygal module to visualize data as histograms
- Navigates user to the repository by clicking on the corresponding histogram

## LANGUAGES AND FRAMEWORKS

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- Proficient: C++, C, Python, HTML, CSS, L<sup>A</sup>T<sub>E</sub>X
- Familiar: Flask, ReactJS, JavaScript, Django, Hadoop, SQLite