

# Chengzhi (Charlie) Gu

Senior Software Engineer @ Pinterest

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## EXPERIENCE

**Senior Software Engineer** @Pinterest, San Francisco, CA

June 2017-Present (internship Jan - May 2015, Jun - Aug 2016)

- Pioneered and developed Querybook, a big data IDE web app built with React and Flask. It is one of the most widely used internal tools at Pinterest.
- Refactored and contributed to the open-source Querybook (querybook.org). Rewrote the code to be plugin-based to separate internal logic. Wrote comprehensive documentation for users and developers. Setup Github actions for CI/CD.
- Contributed to Internal Tools Platform, which is a collection of libraries and pipelines to make internal web development easier. Implemented a Docker based VSCode dev environment and improved the Jenkins Groovy pipeline.
- Designed and kickstarted multiple data tool projects such as Flohub (UI-based SQL query scheduler) and WQuery (template-based query UI).

**Undergrad Research Assistant** @University of Waterloo, Waterloo, ON

Sept 2016-Dec 2016

- Developed a network motif detector based on mfinder to analyze large graphs under supervision of Prof. Semih Salihoglu.

**Software Engineer Intern** @Microsoft, Redmond, WA

Sept 2015-Dec 2015

- Improved and productionized an anomaly detector based on the random forest to run on Cosmos.
- Developed a support ticket categorizer alongside a website for manual correction.

**Software Developer (Co-op)** @Osellus Mobile, Toronto, ON

May 2014-Aug 2014

- Developed an animation creator using Cocoa which can export animations that can be played on Mac and IOS.

## PROJECT HIGHLIGHTS

**Querybook**

Sept 2017 - Presnet

React/Redux, Flask, Celery, SocketIO, ElasticSearch

- A Big Data Query IDE with collaborative editing and visualizations.
- Can execute many queries with live updates by leveraging Celery and SocketIO.

**WebGL Engine**

June 2017 - Nov 2017

WebGL, browserify

- A 3D graphics renderer built with vanilla JS.
- Supports terrain/water rendering, skybox, lighting.

## SKILLS

### Languages

- Typescript
- Javascript
- Python
- C/C++
- Groovy
- Bash
- SQL

### Technologies

#### Web

- React
- Redux
- Mobx
- D3
- Next.js
- WebGL

#### Backend

- Docker
- Flask
- Celery
- SQLAlchemy
- Gevent

#### Databases

- MySQL
- Redis
- ElasticSearch

## EDUCATION

**University of Waterloo**

Sept 2012 - Dec 2016

**Bachelor of Mathematics**

Majored in Computer Science, Combinatorics & Optimization