

# Patrick Cao

Gaithersburg, MD • patrickrcao@gmail.com • (301) 792-4810 • <https://prcao.github.io/>

## Education

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### University of Maryland, College Park

CANDIDATE FOR B.S. IN COMPUTER SCIENCE, GPA: 3.96

University Honors, Recipient of President's Scholarship

College Park, MD

Expected 2022

## Experience

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### Leidos

SOFTWARE INNOVATION DEVELOPMENT INTERN

Gaithersburg, MD

June 2019 – Aug 2019

Support Leidos' Internal Research and Development (IRAD) team

- Created a geospatial data manipulation/visualization tool capable of handling tens of millions of coordinate points, exposed through a RESTful API using Java, ElasticSearch, and AWS
- Created a FUSE filesystem to stream image tiles from a server into a local file for backwards compatibility with commercial off the shelf electronic light tables

(Java, Javascript, Angular, AWS, ElasticSearch, Data visualization, Image processing)

### Institute for Bioscience and Biotechnology Research

DEVELOPER INTERN

Rockville, MD

June 2017 – Aug 2017

Refactored the Biological Macromolecule Crystallization Database

- Migrated website to Laravel framework
- Worked with MySQL and PHP to improve database data collection process, reducing runtime from ~48 hours to ~3 hours
- Developed algorithm to identify chemical reagent names from plaintext

(PHP, MySQL, HTML, CSS, Laravel)

## Skills

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**Languages** Java, C, Javascript/Node, Python

**Web** React, Express, HTML/CSS

**Technologies** MySQL, MongoDB, Git

## Projects

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See more at <https://prcao.github.io/>

### Listen Together

<https://github.com/prcao/listen-together>

Designed and built a MERN stack web application that allows users to view, request, and vote on music in real-time using websockets

(NodeJS, Express, React, MongoDB, Bootstrap, Socket.IO)

### Endgame

<https://github.com/prcao/endgame>

Built a 2D game engine with Java to implement a feature rich RPG shooter

(Java, Java.awt)

## Leadership

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### Taiwanese American Student Association

October 2018 – Present

JUNIOR OFFICER

- Manage development of website and app of Intercollegiate TASA's 2020 East Coast Conference
- Organize, coordinate, and promote TASA events

## Achievements

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**Winner,** Capital One Best Financial Hack, Equals-Equals Hackathon

March 2019

**Runner-up,** Bitcamp Decentralize Everything: Blockchain challenge

April 2018

**1st Place,** Lockheed Martin Code Quest Regionals, Novice Division

April 2017