

Patrick Cao

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Education

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

Leidos

SOFTWARE INNOVATION DEVELOPMENT INTERN

Gaithersburg, MD

June 2019 – Aug 2019

Support Leidos' Internal Research and Development (IRAD) team

- Created a geospatial data manipulation and visualization service capable of handling tens of millions of coordinate points using Java and Elasticsearch. Exposed service through a RESTful API using Java and AWS. Integrated service with an existing Angular application.
- Wrote a FUSE filesystem to process streamed image tiles into a local NITF file for backwards compatibility with traditional NITF viewers.

(Java, Javascript, Angular, AWS, Elasticsearch)

Institute for Bioscience and Biotechnology Research

DEVELOPER INTERN

Rockville, MD

June 2017 – Aug 2017

Refactored the Biological Macromolecule Crystallization Database

- Migrated website from plain HTML/CSS to Laravel framework.
- Sped up runtime of database data collection processes from ~48 hours to ~3 hours.
- Developed algorithm to identify chemical reagent names from plaintext.

(PHP, MySQL, HTML, CSS, Laravel)

Skills

Languages Java, C, Javascript/Node

Web React, Express, HTML/CSS

Technologies MySQL, MongoDB, Git

Projects

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

(Node, 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

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

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