Patrick Cao

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Education

University of Maryland, College Park   *College Park, MD*
CANDIDATE FOR B.S. IN COMPUTER SCIENCE AND ECONOMICS, MINOR IN STATISTICS, GPA: 3.98   *Expected Spring 2022*
University Honors, Recipient of President's Scholarship

Experience

Facebook   *Seattle, WA*
SOFTWARE ENGINEERING INTERN   *June 2020 – Aug 2020*
- Worked with full time employees to redesign, build out, and test a core decision engine that determines if an entity is eligible for ad monetization on Facebook, expected to handle over 10,000 requests per second, and responsible for a total of ~$5 million per day in revenue
- Leveraged internal Hacklang (PHP) and Python APIs to build out workflows for appealing violations, handling high profile actors, and repeat offenders using the new decision engine

Leidos   *Gaithersburg, MD*
SOFTWARE INNOVATION DEVELOPMENT INTERN   *June 2019 – Aug 2019*
- 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 custom filesystem to mock image data from a server as a local image file, allowing an image viewer to 'stream' an extremely large image as the user pans around.

Institute for Bioscience and Biotechnology Research   *Rockville, MD*
DEVELOPER INTERN   *June 2017 – Aug 2017*
- Migrated macromolecule database 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.

Skills

Languages   Java, C, Javascript/Node, Ruby, Python, PHP/Hacklang, OCaml
Web   React, Express, HTML/CSS
Technologies MongoDB, ElasticSearch, MySQL, Git

Projects

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

Backtester   *https://github.com/prcao/backtester*
A stock market strategy backtesting framework, written in Java, visualized in a React webapp

Cloud Aux   *https://github.com/prcao/cloud-aux*
A MERN stack web application that allows users to view, request, and vote on music in real-time using websockets

Endgame   *https://github.com/prcao/endgame*
Built a 2D game engine with Java to implement a feature rich RPG shooter

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