

# Raymond Zou

(US Citizen)



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## Education

### University of Maryland

B.S. Computer Science and Mathematics, GPA: 3.5

College Park, MD

Aug. 2018 - May 2022

- **Gemstone Honors Program:** a 4-year undergraduate research program in the Honors College
- **Relevant Coursework:** Advanced Algorithms, Advanced Data Structures, Multithreading/Concurrency, Natural Language Processing, Data Science, Probability Theory, Applied Probability, Linear Algebra, Calculus III

## Skills

- **Languages:** Java, Python, JavaScript, Go, Ruby, C++, SQL, HTML/CSS, MATLAB
- **Technologies:** Git, Spring, AWS (DynamoDB, EC2, SNS, etc.), Flask, MongoDB, NumPy, Pandas, Gradle, Maven

## Experience

### Apple

Software Engineer Intern | AMP Production Operations

Cupertino, CA

May 2021 – Aug. 2021

- Worked with a team of 4 engineers to redesign and develop a project management application for organizing localization/translation tasks for Apple Music, TV, Podcasts, Books
- Utilized Java Dropwizard framework and Hibernate to build backend REST API web service
- Implemented ranking algorithm to determine artist tier ranks based on percent of plays across global storefronts

### Amazon

Software Engineer Intern | Amazon Fulfillment Technology

Seattle, WA

June 2020 - Aug. 2020

- Utilized Java Spring framework to develop a Hazmat label validation feature for a package processing application preventing over 2.9 million packages from shipping without federally required labels per year
- Integrated AWS SNS messaging into backend microservice interactions to aggregate defect codes into DynamoDB
- Leveraged internal API's to refactor a diagnostic dashboard for AutoSLAM labeling machines

### Federal Data Systems

Software Engineer Intern | Cyber Operations Development

Columbia, MD

June 2019 - Aug. 2019

- Designed and developed full-stack research tool using Hexagonal architecture for cyber-security due diligence and risk-assessment evaluation
- Designed schema for SQLite database and implemented core logic and backend REST API's using Go
- Developed scoring algorithm to assess security protocols and federal compliance

## Activities

### University of Maryland

Undergraduate Researcher

College Park, MD

May 2019 - Present

- Utilized 3dVoxResNet machine learning model architecture implemented in PyTorch for structural MRI multi-class classification of psychiatric illnesses based on morphometric features
- Developed Python-based data tool for adapting standardized neuroimaging directory structures and image types (BIDS, DICOM, Nifti) using TorchIO preprocessing library

### Bitcamp

Logistics Organizer

College Park, MD

Nov. 2019 – Apr. 2021

- Coordinated over 200 volunteers and mentors for the largest Spring collegiate hackathon in the US

## Projects

### NYC Airbnb Price Prediction

An analysis of NYC Airbnb listings using statistical methods like hypothesis testing, and predicting listing prices using Linear, Ridge, and Elastic-Net regression models. (Python, sklearn, NumPy)

### Terp Tutor

A full-stack web app complete with authentication, user management, database, and CSRF protected forms used to connect UMD students with course tutors. (Python, Flask, MongoDB, Bootstrap)

### Jeopardy Question Search

A full-stack web app that searches through aired Jeopardy questions based on trivia categories and dates. Capital One 2020 Software Eng. Summit winning submission. (JavaScript, Fetch API, jService API)