Ivan Chau

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Education

Columbia University, School of Engineering and Applied Science (GPA: 3.67) **Graduating May 2023**
BS in Computer Science, Minor in Applied Math

Coursework: Data Structures and Algorithms, Advanced Prog, Machine Learning, Fundamentals of CS, CS Theory, Intro to Operating Sys. (Princeton), Linear Algebra, Discrete Math, Ordinary Differential Equations

Activities: Columbia Quant Group Research Board, Columbia ICPC Team, Application Development Initiative

Montgomery High School – Valedictorian (GPA: 99.59%) **Graduated Jun 2019**

Skills

Languages: Python, JavaScript, Java, C/C++, Swift

Technologies: Node JS & Express, MongoDB, PostgreSQL, Jupyter, Keras, Sci-Kit Learn, iOS & Android Development, ReactJS & Redux, JQuery, Bootstrap

Experience

Bloomberg L.P Software Engineering Intern **Jun 2020 - Aug 2020**

- Increased developer visibility by creating a Jupyter notebook to aggregate and display issue metrics and metadata across internal databases, available to all developers across Bloomberg.
- Automated the issue triaging process by developing algorithms to quantify "issue severity" using time-series analysis.
- Reduced visual clutter and redundancies by grouping separate, related issues together with graph theory.

Bloomberg L.P Software Engineering Intern **Jul 2019 - Aug 2019**

- Trained a convolutional neural network to classify partisanship from state legislation, enabling the identification of political trends from 2013-2019 per state and discovery of topical content and features for legislation in each political party.
- Improved accuracy by 31% from baseline models by applying word-vector embeddings (GloVe) with Python and Keras.
- Created a website which details my research and allows users to explore different clusters of legislation by partisanship using ThreeJS and T-SNE algorithms.

Bloomberg L.P Software Engineering Intern **Jul 2018 - Aug 2018**

- Increased user flexibility and visibility by creating online IDE with ReactJS and NodeJS, allowing for design and execution of custom web-crawling schemes with real-time feedback from backend processes through Kafka.

Projects

GradeCheck (available on the App Store) **Feb 2016 - Jun 2019**

- Founded a mobile app for the Montgomery gradebook system, accruing over 2.4k users.
- Designed APIs and native iOS and Android apps with a NodeJS and MongoDB backend.
- Helped students improve and focus with personalized push notifications, calendar integration, and statistical analysis.

Flulytics (2nd Place & Facebook Social Good Prize at HackPrinceton https://devpost.com/software/in-b4-uenza) **Nov 2019 - Present**

- Provided analysis of common viral mutations to aid vaccine development using NCBI data and genomic algorithms.
- Predicted strain transmissivity with 85% accuracy using sci-kit logistic regression model and 2009 H1N1 pandemic data.
- Wrote white-paper detailing our analyses on the current strains driving the COVID-19 pandemic.

Awards

Competitive Programming C++/Python - USACO Gold, Top 2500 Google KickStart Round C

WWDC 17 & 19 Scholarship **Spring 2017/2019**

- One of the 300 scholars selected by Apple to attend the Worldwide Developers Conference through submission of a 3D-modeled Solar System in 2017 and Pictionary AI Game in 2019 (Swift Playgrounds).

HackPrinceton - Most Sustainable, Facebook Data for Social Good (https://devpost.com/software/homegrown-suk9lq) **Nov 2018**

- Combatting food deserts with Arduino, soil sensors, and environmental info to suggest growable fruits and vegetables.

PennApps XVIII - Top 30 Winner (https://devpost.com/software/supermaritan) **Sep 2018**

- Designed a community-based emergency response application with React Native, NodeJS, MongoDB, and socket.io.

MHacks Nano - Top 12 Winner (https://devpost.com/software/nano) **Jul 2017**

- Created helpful productivity chrome-extension to monitor excessive internet usage with JavaScript and Chart.js.