Ivan Chau

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Education

Columbia University, School of Engineering and Applied Science (GPA:3.9) **Graduating May 2023**
B.S in Computer Science, Minor in Applied Math
Activities: Columbia Quant Group Research Board, Columbia ICPC, Application Development Initiative, AI @ Columbia

Skills

Languages: Python, JavaScript, Typescript, Java, C/C++, Swift
Technologies: NodeJS & Express, MongoDB, PostgreSQL, Jupyter, PyTorch, Keras, Docker, iOS Development, React

Experience

Arcesium Software Engineering Intern — New York, NY **Jul - Sep 2021**
- Developed a distributed event ingestion system for firm-wide apps with **Typescript**, **Kafka**, **PostgreSQL**, and **NodeJS.**
- Increased horizontal scalability by designing architecture with load balancing, containerization, and auto-scaling logic.
- Allow developers to monitor and interact with system metrics and configurations through a **React** frontend.

TikTok Applied Machine Learning Intern — Remote **Apr - Jul 2021**
- Enhanced fault tolerance and scalability of job coordinating machines by implementing save/restore and load balancing mechanisms using **HDFS**, **Flask**, and **Python**.
- Led research and benchmarking on Locality Sensitive Hashing CPU Training methods for dense networks in **C++**.
- Productionized the Group Follow-The-Regularized-Leader Optimizer in AVX and **Tensorflow**.

Minimap Part-Time Software Engineer — New York, NY **Nov 2020 - Present**
- Led the creation of M.V.P. **Swift** iOS app, and **GCP/Firebase** backend in **Typescript** for launch with three engineers.
- Designed pipeline and algorithms for an event-based recommendation system in **Python** with FFM and Milvus.

Bloomberg L.P Software Engineering Intern — Remote **Jun - Aug 2020**
- Increased developer visibility by aggregating issue metrics and metadata across internal databases, available to all developers across Bloomberg through **Jupyter/Python**.
- Automated the issue triaging process by prioritizing and grouping issues with time-series analysis and graph theory.

Bloomberg L.P Software Engineering Intern — Princeton, NJ **Jul - Aug 2019**
- Discovered political trends and improved baseline accuracies by 31% by training a CNN with GloVe word embeddings to classify partisanship from state legislation using **Python/Keras**.
- Created interactive frontend to explore clusters of legislation by partisanship using ThreeJS and T-SNE algorithms.

Bloomberg L.P Software Engineering Intern — Princeton, NJ **Jul - Aug 2018**
- Increased user flexibility and visibility by creating online IDE with **React** and **NodeJS**, allowing for design and execution of custom web-crawling schemes with real-time feedback from backend processes through **Kafka**.

Projects

GradeCheck (App Store) — Princeton, NJ **Feb 2016 - Jun 2019**
- Accrued 2.4k users by designing brand and mobile app for the Montgomery Township gradebook system.
- Developed APIs, native **iOS/Android** frontend, and **NodeJS** and **MongoDB** backend.
- Worked with school administrators to host, market, and productionize the product to students.

Awards

Competitive Programming C++/Python - USACO Gold, Top 1500 Google Kickstart

Hack The North - Top 12 Overall (ClinicConnect) **Jan 2021**
- Creating a pipeline for individuals to discover and access clinical trials they qualify for. **(Flask, PostgreSQL, NodeJS)**

PennApps XXI - 1st Place Insurtech (Insura) **Sep 2020**
- Lowering insurance premiums through the gamification of home development. **(Swift, NodeJS)**

Hack Princeton - 2nd Place Overall (Flulytics) **Nov 2019**
- Predicting virus mutations with genomic position distributions, NCBI data, and logistic regression **(Python, sci-kit)**

WWDC 17 & 19 Scholarship **Jun 2017/2019**
- One of the 300 scholars selected to attend the Worldwide Developers Conference by Apple.