MATTHEW YU

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EDUCATION

University of California, Berkeley   **Graduation: May 2023**
BA in Computer Science   **GPA: 3.77**
Coursework: Software Development (current), Artificial Intelligence (current), Database Systems, Algorithms, Data Structures, Computer Architecture, Discrete Math and Probability, Information Devices and Systems, Cloud Computing
Skills: Python, Java, C, Go, Ruby on Rails, Agile, Flutter, Firebase, SQL, MongoDB, TensorFlow, Figma, SSAS, Dart

WORK EXPERIENCE

Microsoft   **Taipei, Taiwan**
Business Operations Intern (Business Intelligence, DAX, Microsoft Analysis Services)   *June - August 2021*
- Implemented an OLAP approach to clean 10+ years of medical data for the Taipei Veteran General Hospital, constructed a data warehouse in Microsoft Analysis Services, and cut each query to under 6 seconds.
- Visualized employee performance and lab sample rejection rate with interactive dashboards using Microsoft Power BI, tracking the status of 800,000+ lab tests in 20+ locations offering real time business intelligence.
- Built a proof of concept for storing and viewing WSI files for the pathology lab using the DICOMweb standard.

Baidu, Inc.   **Santa Clara, CA**
Software Developer Intern (**Python, Docker, K8s, data analysis/visualization)**   *May – June 2020, July - August 2019*
- Troubleshot race condition bugs and proposed solutions with resource locking (serialization) by efficiently parsing through log files (1 million+ lines) and calculating the probability that each event caused an error.
- Created a visual representation of the Kubernetes cluster runtime (undirected graph of 10+ nodes and 100,000+ edges), identifying a self-loop issue that led to resource exhaustion due to infinite recursion.

Baidu, Inc.   **Beijing, China**
Product Manager Intern (competitor analysis, market research, public speaking)   *June - August 2018*
- Compiled a report detailing Google's 12 most significant acquisitions to enter the hardware space (Motorola, Nest Labs, HTC…) helping Baidu better navigate the maturing smart-speaker market in China.
- Performed competitor analysis on the Apple HomePod, Google Home, and Amazon Alexa. My report included 2 interviews with IoT experts and an index of the top 30 Alexa skills, their categories, star ratings, and user reviews.
- Presented my research during the Smart Living Group team retreat, assisting in Baidu's efforts in surpassing Google in smart-speaker sales globally and becoming the market leader in China.

LEADERSHIP

FLAMINGOE | Founder, CEO, and Software Engineer   *January 2021 - present*
- Founded a technology startup that aims to streamline social/professional gatherings on the college campus.
- Regularly reach out and maintain relationships with mentors and investors while leading weekly meetings to evaluate the progress of our ongoing competitor analysis and programming tasks.
(FLAMINGOE is a Flutter app with Google Firebase as the backend, some features include user authentication, event creation, event/profile updating, event reservation, a real-time feed, and social features. Here is the App Store link)
Computer Science Mentors | Junior Mentor   *August - December 2020*
- Tutored UC Berkeley undergraduates weekly on Java programming, data structures, and efficient algorithms.
- Prepared lecture-style lesson plans and hosted one-on-one check-in sessions throughout finals week.

PERSONAL PROJECTS

FunPy | C, Python, Intel Intrinsics, multi-threading   *November - December 2020*
- Recreated NumPy using C with performance in mind, speeding up matrix multiplication by 200x, matrix power by 1000x, and **placed 4th in a class of 1200 students**. Techniques used included Intel Intrinsics (AVX), multi-threading, loop unrolling, caching, optimizing for log(N) runtime, and using optimal memory access patterns.
PearChat | Docker, Microservices, REST API, GO, SQL, JSON   *August - December 2020*
- Implemented the backend for a social media web app to handle API requests using a microservice architecture.
GitLet | Java, Object Oriented Programming   *March - May 2020*
- Recreated Git with Java and implemented 'add', 'rm', 'commit', 'branch', and 'merge' features using OOP.