Alan Liu

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Education

Yale University, New Haven, Connecticut
M. S./B. S. in Computer Science, May 2018
Cumulative GPA: 3.67
Coursework Focuses: Machine Learning (Vision/Audio), CS & Economics, Core (Systems, Parallelization)

Experience

Facebook — Software Engineer (Portal AI Team)   July 2018 - Present
- (Unreleased) Sensitive On-Device AI Feature
    - (Leadership) Technical point of contact for critical keystone software for the next generation Portal experience. This feature is the integral part of a major software initiative by the entire Portal organization (~500 engineers). It is so tightly coupled to this product initiative, that without it, the initiative would no longer be feasible.
    - (Product) Directly managed internal US launch to Facebook employees as project technical point of contact coordinating with 3+ engineering teams (indirectly coordinating work between ~25 people) and legal/privacy counsel
    - (Systems) Designed and built a secure persisted storage system designed to handle sensitive user data for on-device models. Included work on model migrations, model evaluations and feature extraction
    - (Systems) Designed as securely encrypted and intrinsically private, revealing user data as little as possible
    - (Data) Set up data annotation pipeline training and evaluation data (roughly 100k tasks/mo.)
    - (Modeling) Worked with 2 others on team to bring algorithm from proof of concept demo to internal launch in the US (3k+ devices)
- (2019) Portal Gen 2 Hardware Launch
    - (Systems) Re-architected full system state for Portal Smart Camera to support new hardware capabilities. This was challenging due to the complex internal state used to handle multiple camera and audio streams that needed to be synchronized in order for this re-architecture to be completed successfully and without bugs.
    - (Modeling) Created new pose bounding box and keypoint model based off of data distillation showing a 10% increase on core Coco keypoint evaluation for the on-device model (usually the target improvement by one ML-focused engineer over the course of a year)
    - (Data) Reweighted data and evaluation algorithms based on product intuition around family usage, focusing on children and young adults. Increased detection of babies by 5% and toddlers by 8%

Google — Software Engineering Internship (Project Fi Team)   Summer 2017
- Integrated multi-device cloud message storage solution with Project Fi text messages on backend server,
- Added Mendel experiment framework into messaging framework enabling future A/B tests and controlled feature launches

Fitbit — Software Engineering Internship (Device Cornerstone Team)   Summer 2016
- Created a microservice to retrieve and deliver data to internal Fitbit endpoints
- Leveraged existing protocols to create proof of concept for weather application on Fitbit Charge 2

Awards (College)

Yale: Timothy Dwight Gordon Cup (For dedication to YHack, Yale's Hackathon)
Hackathons: DataFest 2017 Winner, PennApps Top 10, HackPrinceton Spring 2nd Place Hardware, HackPrinceton Fall Best iOS App, TreeHacks Best Use of AWS, YHack Best Use of MongoDB API
Mathematics: AIME(American Invitational Math Exam) Qualifier 2012-2013, ARML Qualifier 2012-2014
Language: Yale Light Fellowship – Study Abroad in China (Summer 2015)

Skills

Programming Languages: Java(expert), Python (experienced), C(experienced), HTML/CSS (comfortable)
Foreign Languages: English(fluent), Chinese(fluent), Spanish (comfortable)