

# Xingfan Xia

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## EDUCATION

### Carleton College, Northfield, Minnesota

- B.A. in Computer Science Graduated Jun 2018
  - Related Course Works: Human-centered Computing, Operating Systems, Database Systems, Computer Graphics, Software Design, Programming Languages, Computability and Complexity, Coding Theory, Computer Sound

## WORK EXPERIENCE

### Apple, Cupertino, CA

- Machine Learning Engineer Aug 2020 – Present
  - Contributed to on-device user profiling framework which consists of several models to predict users' overall interest and preferences.
  - Built listener services to collect feedback and loggings to better track engagement of suggestions and prediction provided.
  - Improved the current location model using more diverse data sources with better filtering and data sanitation.
  - Overhauled the topic prediction model with more up to date data source and sanitized features.
  - Developed an automatic machine learning pipeline which retrains models with data source updates, launches experiments A/B testing the models, and deploys if a specified improvement is observed.
  - Working on action prediction features which predicts what a user intends to do at a particular time and location based on various signals and models.

### Airbnb, San Francisco, CA

- Software Engineer Jan 2019 – Aug 2020
  - Developed a machine learning model on millions rows of data to tackle down the fake review problem at Airbnb with Sklearn and Pandas, cutting the volume of fake reviews to 1% of the peak volume and prevented 2 million loss in coupon and credits.
  - Trained a machine learning model on millions rows of data to produce generic risk score with Sklearn and Pandas, evaluating the overall risk of users on Airbnb especially on Airbnb hosts, similar to Alipay's Zhima/Seesame score.
  - Collaborated with team to launch the delayed payout policy which delays the payout of risky Airbnb hosts, prevented 60% of fraudulent payouts being made and hence in an estimated 10 mmillion in annual savings.
  - Built a java service which provides downstream service with risk signals easily from a single source of truth without having to dive into hundreds of services and APIs using Redis, Hive, and Apache Kafka.
  - Designed and Implemented a scoring java service which produces risk score of certain event and senario supporting 6 downstream consumers using Redis, Hive, and Apache Kafka.

### Lino Network, Cupertino, CA

- Software Engineer Mar 2018 – Oct 2018
  - Performed a major upgrade of DLive, largest live streaming DApp on Blockchain; implemented a twitch-like chatting experience with VueJS, GraphQL, and Web Socket. Dramatically increased user retention rate by 150% and average daily session length by 350 %.
  - Architected and developed a video platform that includes ingest, transcoding, and distribution of video files in Golang with AWS S3, SQS, and Cloudfront from scratch. Serving terabytes of video content in different qualities globally.
  - Built GPU-accelerated transcoding cluster for the video platform in Golang with FFMPEG and Nvidia CUDA. Increased transcoding efficiency by 15 times and expanded the supported video formats and codecs.
  - Improved users' experience uploading video by deploying video ingest service in 7 major regions of the world to reduce uploading wait time and the possibility of transfer errors with AWS API Gateway and AWS Lambda.
  - Secured content on the DLive platform by implementing signed-cookie protection on AWS Cloudfront in Python to defend third-party malicious attack.
  - Designed and implemented data pipeline at Lino from scratch to monitor user behaviors, user QoE metrics, and streaming service robustness with AWS Kinesis, AWS Lambda, ELK Stack, and Splunk. Performed real-time analytics of gigabytes of logs from users and aggregated into comprehensive reports and dashboards that provides both technical and business insides.

## TECHNICAL SKILLS

- Programming Languages: Proficiency in Golang, Python, Java, Javascript, Scala, C, Objective-C
- Frameworks: VueJS, Bulma, LAMP, GraphQL, NodeJS, React, Django, ELK, Splunk, Apache Spark, Apache Kafka
- Tools: Ubuntu, Docker, FFMPEG, Nvidia CUDA, MongoDB, MySQL, Redis, Hive, HDFS, Presto
- Proficient AWS Services: S3, SQS, EC2, Lambda, API Gateway, Auto Scaling Group, Cloudfront, Route 53, CodePipeline, CodeBuild, CodeDeploy, Elastic Beanstalk

- Machine Learning & Deep Learning: Scikit Learn, OpenGL, Theano, Matplotlib, Scipy, Numpy, Pandas, Keras, Jupyter, Private Federated Learning