Li Pei

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EDUCATION

- **Carnegie Mellon University** — Pittsburgh, PA
  Master of Electrical And Computer Engineering, GPA: 3.92/4.00 — *May 2016*

- **Harbin Institute of Technology** — Harbin, China
  Bachelor of Science, Communication Engineering, GPA: 87.78/100 — *June 2014*

SKILLS

- **Programming Language** : Working with Scala and Java, hands on coding in Bash, project experience in Go and C.
- **RTB Lifecycle** : Experienced in DSP building and maintenance. Familiar with Open RTB protocol and integration workflow. Knowledged about ID-Sync, audience targeting, etc.
- **Microservice Building** : Experienced in building microservice with Finagle, Zookeeper, Docker, Mesos, Nginx
- **Big Data ETL** : Real life work on data stream with Kafka. Experienced in ETL pipeline build with Scalding, Spark, Oozie, Sqoop. Familiar with big data storage like Hive/Impala, HDFS.
- **API Implementation** : Worked with both Play and Node.js. Relational database experience in MySQL and Postgre.
- **Agile Working** : Agile team experience including pair-coding, code review, test and validation in full lifecycle, etc.

EXPERIENCE

- **Tapad Inc.** — New York, NY
  Software Engineer — *July 2016 - Present*

  ○ **Demand Side Platform** :
  ◇ Worked in a 3 people team owning real-time bidding system with million level QPS and under 10 ms P99 latency.
  ◇ Major contributor in Open RTB integration. Built Native ads serving process from scratch, the work included DB design, built request/serving mechanism and internal preview API.
  ◇ Created embedded bidder debugger featuring MVEL supporting multiple filter expressions for traffic monitoring.

  ○ **Audience ETL Platform** :
  ◇ Built and extended features of an automated target audience ETL platform from scratch.
  ◇ Contributed in ETL and API design. Paired with frontend engineer on API implementation with Typed.js.
  ◇ Integrated with 2 major partners and customize upload client with status logging, error and flow control feature.
  ◇ Implemented sbt integration test in one command for API and wrapper client featuring docker compose.

  ○ **Tracked Event Streaming** :
  ◇ Implemented a tracked event streaming pipeline from internal to external platforms with Kafka.
  ◇ Built the notification mechanism from API to consumer for consumer in-memory map refreshing with Zookeeper.

  ○ **Analytics Report Generator** :
  ◇ Built pipeline for hourly thirdparty data import and summarization with Hadoop, Oozie and Sqoop.
  ◇ Dockerized VM-based report worker and API. Configured them in Mesos with service discovery through Nginx.
  ◇ Implemented worker coordination mechanism using Zookeeper in case of Mesos instance failure and report loss.

  ○ **IP Look Up Service** :
  ◇ Used Mesos, Finagle and Zookeeper to dockerize off-heap memory based service out of bidding system.
  ◇ Implemented client side lazy evaluation and cache to minimize service QPS and latency to improve performance.

  ○ **Cross Screen Audience Experiment** :
  ◇ Took full charge of whole ETL pipe-line design, implementation and performance validation.
  ◇ Extracted data from AWS S3 and HDFS, transformed data and generated a graph based cross screen target audience with Scalding. Implemented data upload mechanism to thirdparty platform.

- **EEme, LLC** — Pittsburgh, PA
  Software Engineer, Part-time Intern — *Mar. 2016*

  ○ **Analytics Frontend** :
  ◇ Built an asynchronous file drag-drop upload feature with Ruby on Rails and deployed on Heroku. The feature included drag-drop, file validation, request to analytics engine and display analytic response in UI.