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**: Mainly use Scala and Java, hands on coding in Bash, project experience in Go and C.
- **Real-time Bidding System**: Experienced in DSP build, tuning, maintenance and trouble-shooting. Familiar with Open RTB protocol and integration workflow. Knowledged about ID-Sync, audience targeting.
- **Microservice Building**: Working in building microservice with Finagle, Zookeeper, Docker, Mesos, Nginx
- **Big Data ETL**: Real life work on building data stream with Kafka. Experienced in implementing ETL pipeline with Scalding, Spark, Oozie, Sqoop. Familiar with big data storage like Hive/Impala, HDFS.
- **API Implementation**: Design and implement API using Scala in Play Framework and Typed.js in Node.js. Relational database design in MySQL, Vertica and PostgreSQL.
- **Agile Working**: Comfortablly working in agile team. Deeply involved in agile coding process including pair-coding, code review, writing unit, functional and integration test, etc.

EXPERIENCE

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

  - **Demand Side Platform**:

    Worked in a 3 engineers team taking full responsibility of real-time bidding system. The system is faced with million level QPS and P99 latency is under 10ms.

    Involved deeply with several SSP integrations and well knowledged on OpenRTB protocol. Taking lead in team for upgrading OpenRTB 2.4. Major contributor to Native creative integration from scratch, the work included database design, request parsing and serving matched creatives, integration test and API implementation in Play for internal preview).

    Added debugger tool in bidding system for both engineer and account manager use for trouble shooting. Featured MVEL to support multiple filter expressions like platform, user-agent, etc.

  - **Audience ETL Platform**:

    Worked in a 4 engineers team building an automated target audience ETL platform from ground.

    Participated in pipeline and Postgre database design. Building API with Typed.js on Node.js and construct client library in Scala.

    Integrate audience upload with two major partners and customize upload client with status logging, error control and flow control feature.

    Featured docker compose to implement an sbt integration test mechanism.

  - **Cross Screen Audience Experiment**:

    Taking full charge of whole ETL pipe-line design and implementation. Data extraction from HDFS, transforming data from different source to targed cross screen audience and load data to thirdparty through customized client. Working with PM and client on data analysis and validation with Scalding.

  - **IP Look Up Service**: Moved out off-heap memory based IP look up service from bidding system to independent Mesos service, saved resources in virtual machine. Built service and client wrapper based on Finagle, and used Zookeeper for service discovery. Implemented client IP lazy evaluation and cache to minimize service queries and improve performance.

  - **Tracked Event Streaming**: Implemented an event streaming pipeline for improve campaign performance in third party platform. Enriched API for mapping thirdparty tracking event to internal events. Featured Kafka for real time tracked event streaming to thirdparty platform. Use Zookeeper for notifying consumer refresing for events update.

  - **Analytics Report Generator**: Participate in building pipeline to schedule daily data summary to ease the workload in database using Apache Oozie and Sqoop. Dockerized existing report generation service. Implemented report generator's coordination mechanism using Zookeeper for report loss recovery.

- **EEme, LLC** — Pittsburgh, PA
  Software Engineer, Part-time Intern — *Mar. 2016*
  - **Analytics Frontend**:
    Building file drag-drop upload feature using Ruby on Rails deployed on Heroku.
    Implemented async request-response cycle from file reading, validating and parsing, getting report from backend analytic engine, to serve formatted report to client