

HAOTIAN ZHOU

Software Engineer @ Amazon | MSAl Alumni @ CMU

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EXPERIENCE & PROJECTS

Amazon SDE Fulltime
Jul 2020 - Present Seattle

Seller Level CIV¹ for Amazon.in

Provide CIV estimates for more than 120,000 sellers in India

- Built data pipelines based on AWS StepFunction. Created ETL jobs to collect data from S3, run prediction on EMR and publish estimates to Redshift
- Worked together with economists to develop ML model
- Refactored RESTful Service API to support seller-level granularity.

CIV Backend Infrastructure Optimization

Greatly improved the performance, reliability and scalability of CIV internal systems

- Migrated DynamoDB related operations from single host to EMR cluster. Used Spark to distribute DDB operations. 7 times faster + more reliable & scalable
- Implemented AWS Lambda Function support, migrated backend functions to server-less application.

Contribution Profit Boost Process Automation

Designed and implemented the automoted CP Boost pipeline cross three teams

- Coordinated engineers and economists from three teams to design the schema and validation rules for shareable data.
- Set up cross team automated pipeline to run ETL jobs, validate datasets, generate & send reports for review.
- Reduced manual operation by 80%. Shortened the entire process from one month to 5 days

Amazon SDE Intern
May 2019 - Aug 2019 Seattle

CIV Backend 2.0 Prototype

Extendable data pipeline backend integrated with AWS Services

- Built data pipeline backend with centralized workflow control based on AWS Step Function
- Developed new features by integrating multiple AWS Services : Added alarms via CloudWatch; enabled notification system via SNS; implemented EMR control to run Spark jobs; added util functions for DynamoDB & S3 to import/export data

Carnegie Mellon University Capstone Project
Jan 2020 - May 2020 Pittsburgh

Chatbot to Chatbot QA system

Chatbot that can make outbound call to IVR² system, answer IVR questions & transfer call back to human

- Integrated with Twilio APIs to make outbound / inbound call and get audio streams
- Integrate with Google Cloud Speech-to-Text API to transcribe audit stream in real-time
- Applied NLP technologies to detect questions, search & build answers according to information stored in database
- Sponsor Scholarship Winner

¹CIV : Consumer Instock Value, an economic concept that evaluates long-term impact of a retail offer instock status change

²IVR: Interactive Voice Response System

CAREER OBJECTIVE

Experienced Software enginner with solid knowledge of Big Data, Cloud Computing and AI technologies

AREA OF INTEREST

Software Development

NLP

Cloud Computing

Data Engineering

Machine Learning

Deep Learning

TECHNICAL SKILLS

Python

Java

C

SQL & HQL

Scala

JavaScript

AWS Services

Git

NLP

Distributed System

DeepLearning

Spark & Hadoop

PERSONAL SKILLS

Quick Learner

Team worker

Problem Solving

Self-motivated

Flexible & Responsible

EDUCATION

M.S. Artificial Intelligence
Carnegie Mellon University
2018-2020 GPA: 3.95

B.E. Computer Science
Harbin Institute of Technology
2014-2018 GPA: 3.75