Xuanyi Li

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EDUCATION

The Ohio State University **Columbus, United States**
Master of Science in Computer Science; GPA (3.96/4.0) 08/2017 – 05/2019

Zhejiang University **Hangzhou, China**
Bachelor of Engineering; GPA (3.97/4.0); Ranking (4/144) 09/2013 – 07/2017

TECHNICAL SKILLS

Programming Language: Java, Python, SQL, C, Lisp, X86 Assembly, Javascript, AJAX, HTML, CSS
Framework and Tool: Spring Boot, Spring AOP, Mybatis, Git, Keras, Gson, Redis, Jekyll, TEX
Alibaba Middleware: RocketMQ(JMS), HSF(RPC), Tair(Cache), Diamond(Persistent Config Center)

WORK EXPERIENCE

Mlab: Business Intelligence Platform **Alibaba**
Backend Engineer Intern 05/10/2018 – 07/25/2018

- Developed a business intelligence platform by Spring Boot and Alibaba distributed middlewares.
  - Automated almost all development steps for machine learning products.
  - Helped the team of coupon recommendation to reduce the development cycle to 1 week.
- Implemented the offline training module.
  - Adopted 3 design patterns, namely Builder, Abstract Factory and Template Method, to work out the diversity of algorithm execution node: serialization, deserialization, dynamic parameter web form.
  - Used Java Annotation to implement the exclusion strategy of customized serialization in Gson.
  - Utilized Apache http client to trigger training on PAI (Alibaba offline training Platform).
- Assisted in online model development and dynamic SQL generation.
  - Servers cache customized model at Tair and push the corresponding version object to Diamond Server.
  - Clients asynchronously listen to the version change and poll the latest model from Tair.
  - Implemented automatic A/B test for real-time prediction.

Deep Learning Internship **Singapore University of Technology and Design**
Research Assistant in NLP Lab (published a paper in DSAA) 07/03/2016 – 08/31/2016

- Ameliorated basic multi-task deep learning model with Keras to detect the sentiment polarity, reviewer identification, subjectivity/objectivity of each text simultaneously.
- Crawled 75, 000 reviews from rotten tomato with Python. Inserted CNN for each task to capture exclusive features and gated control unit to filter noise, improving accuracy by 0.47% and 1.10% respectively.

PROJECTS

Micro Seckill System 02/2018 – 03/2018

- Responsible for backend engineering with Spring Boot: countdown before the seckill activity (purchase merchants in a short time); avoid overselling and redundant purchase on the same item.
- Used Mybatis to implement the interface at DAO tier, namely CRUD operation.
- Integrated log4j and Spring AOP to intercept each http request at SpringMVC controller Layer.
- Combined two cache refreshing strategy on Redis, namely timeout eviction and initiative update, to ensure the eventually consistency between cache and database.
- Adopted the transaction compensation pattern with RocketMQ to achieve high concurrency and ensure transaction consistency involving order generation and inventory subtraction.
- Tested the concurrency performance with JMeter, achieving 1000 QPS.

Selected Infrastructure Projects 01/2016 – 05/2016

- **Multi-thread Programming:** Applied Lamport Clock and Java ReentrantLock to simulate a restaurant. Regarded diners and cookers as threads, and tables, machines and various food as shared resources.
- **Lisp Interpreter:** Implemented internal function of Lisp by Java to value arguments, bind them to corresponding formal parameters and recursively evaluate function body.
- **Parallel Computing:** Used tiling strategy, loop unrolling over 2 dimensions and shared memory in GPU for transposed matrix multiplication acceleration, achieving 26.6 GFLOPS.

PUBLICATION

Xuanyi Li, Weimin Wu, Hongye Su. Convolutional Neural Networks Based Multi-Task Deep Learning for Movie Review Classification. In proceedings of the 4th IEEE DSAA. Tokyo, Japan, 10/2017