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EDUCATION

Northeastern University **Graduation Date(Expected): June 2021**
Master of Computer Science
GPA: 4.00 / 4.00
Core Courses: Computer System, Object-Oriented System Design, Database Management, Foundation of Artificial Intelligence, Machine Learning, Web Development

SKILLS

Programming languages: **Python, Java, Kotlin**
Databases: **MySQL, ElasticSearch, Cassandra, PostgreSQL**
Technologies & Frameworks: **gRPC, AWS, Coroutine, Docker, Kubernetes, BloomRPC, Kinesis, Guava, Guice, Spring, RESTful APIs, Node.JS, Express, React, Kafka**
Tools: **Git, Sentry, Splunk, WaveFront**

WORK EXPERIENCE

DoorDash, Inc. San Francisco, CA
Software Engineer Intern on the search and pricing team May 2020 - Aug. 2020

- Designed and led the project of making Dbp (Distance Based Pricing) filter offline, successfully **eliminated all(1000+) rpc calls per user search request**, **massively reducing the overall need for calling delivery fee servic**e, thus **improving the efficiency of the current search server** (latency for search request reduced by 16%).
- Created a new **ElasticSearch index** with the new field along with all fields from other current in-use indices, largely saving disk space (saved 35%) by successfully retiring current in-use indices.
- Used ElasticSearch sharding knowledge to improve the ElasticSearch resiliency and throughout, which **doubled** ElasticSearch query capacity, triggered rebalancing of nodes (standard deviation of each node's remaining storage improved by 60%) and released maximum CPU usage by 45% even under high traffic.
- Implemented **shadow calls**, **experiment** parsing framework, which enabled easily configuring and running multiple tests at the same time, thus making the test process scalable and flexible.
- Utilized **Mockito** to write unit tests and functional tests. Updated queries to generate the results and **accuracy of search results has reached 95%** by watching logs and metrics.
- Implemented fast bulk reindexing, which reduced the total indexing time from up to 3 days to 7 hours.
- Other tech stack used: **gRPC** used to build microservices and to communicate between them with encrypted keys (used tools such as **Ninox**), **Cassandra** for A/B test config setting and **Kinesis** for bulk indexing.

PROJECTS

Restaurant Discovering Service and App

- Developed a full-stack web service to let users search for nearby restaurants, and improved personalized business recommendation based on personalized information, e.g. search history and favorite records.
- Built Java servlets to handle HTTP requests and response (using **RESTful APIs**) and designed an interactive web page using AJAX technology (**HTML, CSS, JavaScript**).
- Built relational (**MySQL**) and NoSQL (**MongoDB**) database to store restaurant data retrieved from Yelp API, and designed content-based recommendation algorithm for restaurant recommendation.
- Deployed server to AWS EC2 to handle 150 queries per second and used **Apache JMeter** to test.

Online User Analytics Tool

- Used **ElasticSearch** to store user data and procedure information for future analysis.
- Analyzed user geographic distribution using **GeoIP** in Kibana.
- Used **MapReduce** in MongoDB to process logs extracted from web services to find peak periods of resource usage.
- Used **JMeter** to test geolocations of 10K fake users and delivered to 70 alpha test users to improve the quality and be ready for beta test.

Online User Analytics Tool

- Built a dashboard (using **React, Ant Design and D3 Shot Chart**) to visualize individual player's shot's data.
- Implemented linked highlighting among all charts using common raised React state.
- Built a field goal percentage filter to provide more detailed visualization areas with made shots.
- Designed a match filter to display more specifically stats for home, away, won and lost games.