Mohamed Hammoud

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SUMMARY

Software Engineer at Bloomberg with over two years of experience working on developing well-designed distributed backend services for large-scale data systems.

TECHNICAL SKILLS

- **Programming: Python (Proficient), Java (Proficient), C++, JavaScript**
- **Databases: PostgreSQL**
- **Backend: Apache Kafka, Apache Solr, PyFlask, Redis, Zookeeper, HBase**
- **Tools: Git, Docker**
- **Other: Object-oriented design, Distributed Systems (Basics), Cloud providers (DigitalOcean), Machine Learning, Backend Development, Software Architecture, Agile Software Development, User Experience (UX) Design**

EXPERIENCE

Software Engineer

Bloomberg LP **July 2020 - Present, New York, NY**

- Designed and implemented REST endpoints with PyFlask for a new regulatory reporting web application.
- Developed a real-time data streaming microservice for a new alerting platform that can process upwards of 10K+ data points per second achieving a real-time SLA for alerting.
- Implemented code changes to the Apache Solr open-source project for debugging and monitoring capabilities.
- Technologies: Python, Java, Apache Kafka, Apache Solr, PyFlask.

Software Engineer Intern

Tesla **June 2018 - September 2018, San Francisco Bay Area, CA**

- Contributed to Tesla's self-driving efforts by implementing a proof-of-concept LSTM neural network for autonomous steering control behaviour.
- Developed software improvements and refactored existing vehicle driver code to improve Tesla's regulatory compliance to 100%.
- Developed a new testing infrastructure for test and build automation using PyTest and to support integration with Jenkins.

Student Researcher, Machine Learning

The Hospital for Sick Children **May 2017 - September 2017, Toronto, ON**

- Developed an multithreaded application for data processing of electronic medical records into feature vectors with a throughput of 4600+ records/second and a running time improvement of 90%.
- Developed machine learning models (random forests, logistic regression) for prediction of biological traits and achieved an 80% predictive accuracy.
- Technologies: Python, scikit-learn, Pandas, NumPy, R.

EDUCATION

Honours Bachelor of Science in Computer Science

University of Toronto • Toronto, ON • 2020 • 3.18

PROJECTS

Ridesharing Service, Backend Implementation (Academic Project)

University of Toronto • December 2019

- Designed and implemented a database schema that supports a ridesharing service.
- Implemented a RESTful API for creating rides, dispatching drivers, and performing financial charges.
- Developed complex SQL queries for creating and managing rides, dispatching drivers (based on geometric location and availability), creating billing payments, and various analytics.
- Technologies: Java (JDBC), PostgreSQL.