Tarun Thomas Eapen

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EDUCATION

University of Wisconsin-Milwaukee **Milwaukee, WI**
Master of Science in Computer Science Expected Graduation: May 2024

College of Engineering Trivandrum (CET) **Trivandrum, India**
Bachelor of Technology in Computer Science June 2016

SKILLS AND COURSEWORK

Programming Languages: Proficient in Java, Python, SQL. Experience with C++, C, JavaScript
Tools, Frameworks: Spring Boot, Django, AWS, Microsoft Azure, Maven, NodeJS, React, Angular, Flask, gRPC, MongoDB, REST, OData, Docker
Courses taken: Data Structures and Algorithm Design, Machine Learning, Deep Learning, Data Science, Distributed Systems, Advanced Database Management Systems

WORK EXPERIENCE

SAP Labs India (**Java, Spring Boot, SQL, JavaScript, REST**) **Bangalore, India**
Software Engineer **July 2016 – May 2022**

- Led cross-team project, designing, and developing reusable and robust **REST API**s using **Java** and **Spring Boot** for Indian and South Korean markets to support tax and invoicing requirements, increasing adoption in these markets by 25%.
- Designed and developed **OData/REST microservices** for updating transactional data in real-time which increased invoicing throughput for customers by 45%.
- Collaborated with cross-functional teams to identify and implement modifications to the **database design** and optimized performance of **database queries** by leveraging capabilities of SAP HANA query execution engine resulting in an average 45% reduction in response time of web-based business applications.
- Designed, developed, and maintained **enterprise cloud** applications and **API gateways** for the engineering change management module.

PROJECTS

Health Club Membership Management System [Java, Spring Boot, NodeJS, React, MongoDB] **Dec 2022**

- Developed a highly scalable and secure web application using **Java Spring Boot** and **React** for health club users and administrators deployed on **AWS**.
- Implemented a stateless authentication strategy utilizing **JWT**s with secret management through vault integration.

New York Taxi Fare Prediction [Python, TensorFlow, pandas, scikit-learn, NumPy, XGBoost] **Dec 2022**

- Performed **exploratory data analysis** and modelling to predict New York city taxi fares using NYC Taxi fare and weather datasets.
- Data Visualizations were done with the help of **seaborn, mathplotlib** and **statsmodels** libraries.
- The following prediction models were used - Linear Regression, Random Forest Regression and XGBoost. **XGBoost with hyperparameter tuning** gave the best RMSE value among all the models.

Cognitive Popularity Tracking using Sentiment Analysis [Java, NodeJS, TensorFlow] **April 2016**

- Mined opinions of celebrities from social media and news outlets, calculating sentiment and attributing it to corresponding entities. Used number of mentions as an index of exposure and calculated sentiment as an index of popularity.
- Sentiment analyzer and named entity recognition models from Stanford CoreNLP package were used and coded using **Java**.
- Developed a frontend using a **NodeJS** application, which uses Koa as the server framework and provides a **REST API** service to query the Elasticsearch database. This allowed for easy access and visualization of the mined data for further analysis.