

Date: 31st October, 2020

To Whom It May Concern

This is to certify that **K.H.M. Burhan Uddin** has worked as a **Senior Software Developer** at **Goava Sales Intelligence AB** in **Data Team**, as a full-time employee from **15th May 2017** to **till date**, has proved to be an industrious individual.

For the last three and half years, he has diligently completed his duties in the following departments.

- **Machine Learning & Big Data**
- **Distributed Crawling & Information Retrieval**
- **AWS Cloud Technologies**
- **Scalable Microservices with Serverless Architecture**
- **Full Stack Development and Architecture Design**

He has proved to be skilled with following tools & technologies:

- **Programming Languages:** Python, Java, JavaScript, NodeJS, C#
- **Cloud Platforms:** AWS
- **Machine Learning Tools:** PyTorch, TensorFlow, NLTK, scikit-learn, pandas
- **Platforms and Libraries:** Spring Boot, React, VueJS, Nutch, Spark, Hadoop
- **Database Systems:** MySQL, DynamoDB, ElasticSearch, Redis
- **Web Services:** GraphQL, Rest
- **AWS Services:** API Gateway, Lambda, Elastic Beanstalk, ECS, EMR, Athena, Sage Maker
- **Operating Systems:** Linux, Shell Scripts
- **Tools:** Git

He has contributed in the following projects:

- **News Story Pipeline:**
 - Created a streamed pipeline for processing and storing large scale news data from millions of sources. Technology used ElasticSearch, Lamba, S3, CloudWatch.
 - Designed a robust data structure for storing and searching.
 - Ensured auto scalability of the system based on the incoming amount of data.
- **News Classification, Clustering & Name Entity Recognition:**
 - B2B entity/trigger detection from continuous streams of news was developed leveraging deep learning-based NLP models; trained and deployed on AWS SageMaker in Pytorch lib.
 - Clustering news content and visualizing it to show market data partitions and designed business scopes based on partitions.

- Tagging continuous streams of news for Company and Person name recognition using deep learning methods implemented in PyTorch, trained and deployed in Amazon Sage Maker.
- **Goava Auth:**
 - Designed and developed a centralized authentication and role based authorization system for all microservices.
 - Developed authentication using firebase and spring boot
 - Dynamic role based authorization with hazelcast distributed caching.
 - Developed user and role management admin app portal using React, VueJS
- **Nutch Crawler:**
 - Distributed crawler designed and implemented to crawl millions of URLs, leveraging Apache Hadoop & AWS EMR services.
 - Wrote Nutch plugins to parse millions of URLs contents and extracted B2B valuable entity, partitioned data based on entity, and indexed to ElasticSearch
- **Company Search:**
 - Created microservice using flask, elastic search and AWS api gateway to search millions of companies information.
- **Recommendation System:**
 - Recommends new B2B leads based on different features extracted from existing customers and company profiling.
- **Social Media Crawler :**
 - Continuously crawling social media pages of millions of companies facebook, twitter and youtube channels.

During his working period, he has properly handled his duties and responsibilities assigned to him. We found him competent and active with sincerity and determination for many technical aspects of software development. He is professionally sound and hard-working whose dedication in taking contribution and initiative for the organization has proven helpful in the establishment several times.

His contributions to the organization and its success will always be appreciated. I wish him every success in his future endeavors.



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