# Siddharth Kumar

San José, CA

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# Summary

- Industry experience building large-scale predictive models using recurrent neural networks.
- Industry experience working on Full-stack web development using Java Spring Boot and AngularJS, building REST APIs.
- Hands-on experience developing building distributed applications using Apache Spark and Kafka.

### **Technical Skills**

Languages: Java, C++, Python, R, JavaScript, HTML and CSS

o Big Data: Apache Spark, Apache Hive, Apache Kafka

o Web Frameworks: Node.js, Express, AngularJS, React, Redis

- o Machine Learning: Tensorflow, Keras, Caffe, NumPy, Pandas
- Databases: PostgreSQL, MySQL, PL/SQL, MongoDB(NoSQL)
- o Cloud: AWS, GCP, Azure, Alicloud, Docker
- o Tools & IDEs: Apache Maven, Gradle, Jenkins, Grunt, Git, Eclipse, Android Studio, Jira

### Education

San José State University

Master of Science, Computer Science

Bachelor of Engineering, Computer Science

CGPA: 3.72/4.0 San José, CA Aug 2017 - May 2019

 Indian Institute of Engineering Science and Technology CGPA: 3.52/4.0

West Bengal, India

Aug 2012 - April 2016

# Work Experience

### o Full-stack Development Intern, Hypergrid Inc., San José

June 2018-Present

- Developed REST endpoints for several new features in the platform's latest release, making them available to the customers.
- Migrated the Solr dependencies to Postgres to improve application availability and maintainability, reducing memory usage by almost 20%.
- Optimized the VM provisioning by integrating Redis in-memory caching, substantially speeding up the data intensive operations.
- Integrated machine learning based VM recommendation engine to the platform, makes VM configuration recommendations based on user requirements, reducing the usage cost.

Technologies: Java, Springboot, Gradle, JavaScript, Angular JS, Python, PostgreSQL, RESTFul web services

#### Application Developer, Accenture, India

August 2016-May 2017

- Enhanced and maintained enterprise Java applications in Spring MVC and AngularJS.
- Designed scripts for automated reporting of product data using Python and Shell scripting, substantially reducing the time needed for generating reports previously completed manually.
- Contributed to the development of Accenture Automatic Ticket Resolver, aimed at reducing the average issue resolution time to 2 hours

Technologies: Java, JavaScript, Angular JS, JQuery, Shell Scripting, Python, Maven, PL/SQL, RESTFul web services

### Undergraduate Research Intern, Indian Institute of Technology, Patna, India

May 2015-July 2015

- Created an aspect-based sentiment classifier for online user reviews. More fine-grained sentiment analysis, giving the review for each aspect in a review.
- Developed models for automatic extraction and classification of aspect terms and sentiments using both Conditional Random Field (CRF) and Support Vector Machines (SVM).

Technologies: Java, Shell Scripting, Machine Learning, Support Vector Machines.

# **Relevant Projects**

## End-to-End Speech Recognition Using Recurrent Neural Networks

- Tested different speech recognition techniques based on LSTMs using Connectionist Temporal Classification loss function.
- Performed experiments using different models with language models on the Wall Street Journal Dataset.
- Currently testing and implementing models based on dilated causal convolution layers.

Technologies: Python, Tensorflow, NumPy, Neural Networks

#### Faster R-CNNs with Modified Region Sampling

- Implemented Faster R-CNN framework using TensorFlow and tested it on Pascal VOC 07, 12 and MS COCO datasets.
- Proposed modifications to the region proposal method, which slightly improved the mAP during testing.

Technologies: Python, TensorFlow, Deep Learning, Convolutional Neural Network, Deep Residual Networks

#### Distributed Convolutional Neural Network using TensorFlow

- Implemented deep convolutional neural networks in TensorFlow for distributed training.
- Trained and tested the model using the CIPAR-10 dataset for building an image classifier.
- Developed the program to perform parallel distributed training on several nodes on Google Cloud reducing the training time by almost 40%.

Technologies: Python, TensorFlow, Deep Learning, Convolutional Neural Network