# Sharan Srivatsa

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## EDUCATION

### CU BOULDER
MS in Computer Science
Expected May 2019 | Boulder, CO
Cum. GPA: 4.0/4.0

### PES UNIVERSITY
BE in Computer Science
Sep 2011 - Sep 2015 | Bangalore, India
Major GPA: 9.05 / 10.0

## COURSEWORK

### GRADUATE
Natural Language Processing
Design and Analysis of Algorithms
Machine Learning
Database Systems
Big Data Architecture

### UNDERGRADUATE
Cloud Computing and Big Data
Data Structures and Algorithms
C, Java, Python, Unix, PHP
Database Systems
Operating Systems
Software Engineering
Object Oriented Modeling and Design
Web Technologies, AJAX, HTML, CSS

## SKILLS

### PROGRAMMING
Proficient
Python • Java • C• LaTeX
Familiar
CSS • PHP • Shell Script • C++

### TECHNOLOGIES
Hadoop• Openstack• Numpy• Spring • Tensorflow

## LEADERSHIP

### HADOOP ON OPENSTACK
Advisor: Dr. Dinkar Sitaram | April 2013
Technologies used: Hadoop, Openstack, Python, Ganglia
Led a team of fifteen members on a project which involved autoscaling of Hadoop nodes in an Openstack environment based on the number of pending Hadoop map and reduce tasks

## ONGOING PROJECTS

### SEARCH ENGINES
Advisor: Prof. Greg Greenstreet | March 2018
Technologies used: Hadoop, Cassandra, Python, NLTK, Bootstrap, CSS, HTML, Apache, AWS
The project aims at building a search engine for twitter data. The objective is to convert Natural Language Queries entered by users to Cassandra queries, which result in top tweets for the query presented. The search and data framework are setup on Amazon Web Services(AWS) and results are displayed on a web framework.
Accuracy and Performance measures will be measured by benchmarking against the Twitter API.

### OBJECT RECOGNITION
Advisor: Dr. Christian Ketelsen | March 2018
NLTK, Scipy, Tensorflow, ScikitLearn, Machine Learning, Image Processing
The aim of the project is to use CNNs and other deep learning models to recognize different objects in images with the aim of image summarization. As a future enhancement we intend to implement parts of Stanford's Visual QA system.

### MEASURING A CASSANDRA CLUSTER
Advisor: Dr. Frank Miller | March 2018
NTP, Cassandra, Docker, Linux, VM
This project focuses on measurements across a Cassandra cluster for various topologies. We are particularly interested in measurements of latency and clock skew. The topologies consist of different arrangements of VMs, containers and physical hosts.

## EXPERIENCE

**SCIBLER** | Software Engineer
June 2015 – Jan 2017 | Bangalore , India

- Scibler is a start up based out of Bangalore with operations in Santa Clara, USA with a focus on Machine Learning and Data Mining. The company provided AI powered solutions for interpreting user email. Scibler is now rebranded as frontdesk.ai.
- Built a entity extractor, intent detector and a response generator for the text based Scibler Chatbot.
- Involved in setting up frameworks for collaborative training of data for existing classifiers to enhance its performance.
- Involved with using Support Vector Regression to learn a model to prioritize a user's tasks, based on Contact Importance.

**SCIBLER** | Software Engineering Intern
Jan 2015 – May 2015 And Jun 2014 - Aug 2014 | Bangalore , India

- Researched various existing time detector technologies and integrated Stanford's SUTime with the Scibler pipeline.
- Concluded that Scibler needed a stand alone time detector framework and started work on the same.
- Built a regex based time detector which extracted and interpreted time patterns from textual email data. The system achieved an 80% recall better than SUTime. The implementation is currently being patented.
- Involved in various marketing tasks during Tech Crunch to keep the app trending, there by increasing the effective reach of the app.

## PROJECTS

**COMPARATIVE STUDY OF STATISTICAL AND GRAPH BASED RECOMMENDATION SYSTEMS** | Advisor: Prof. Ashutosh Trivedi | August 2017 - December 2017
Technologies used: Python, SKLearn, Scipy, Numpy

- The project is aimed at understanding various recommendation systems currently available - both machine learning based and graph based so as to identify use cases for each kind of system.
- We investigate statistical recommendation techniques based on collaborative filtering(user and item based). The addition of content and context is also evaluated through Bayesian models with algorithms like Probabilistic Matrix Factorization.
- We aim to fabricate a graph based recommendation system for movie data based on motivation from social networks.

**CHAT BASED AUTOMATED SALES ASSISTANT** | Advisor:Prof. Anantharaman P.N. | April 2015
Technologies used: Machine Learning, Natural Language Processing, Python, NLTK, MySQL

- Used Python to design a chatbot to understand and answer natural language queries about mobile phones.
- The project involved building a Named Entity Recognizer using the Hidden Markov Model. A Relationship Entity Extractor was build using the Viterbi algorithm and finally a natural language response generator which converted the resultant query into natural text.

**FRAMEWORK FOR HIGH AVAILABILITY OF APPLICATIONS** | Advisor: Prof. Phalachandra H.L. | April 2015
Technologies used: Unix,C, HTML, Javascript, Bootstrap, PHP, CSS, Ajax, Python, Linux, LaTeX, Spring, Shell scripting

- Developed a framework on top of which applications could be written with assured availability and stateful restart so that it can run without any visible interruptions.
- Minimum downtime, heartbeating mechanism and stateful restarts were some of the key aspects of what the project handled.
- This framework was written in C and built in the Unix Environment. POSIX Compliance was assured as much as possible.