Vaibhav **Joshi**

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Education

Rochester Institute of Technology — *Rochester, NY*

Master of Science in Computer Science (GPA : **3.17**) — *Aug 2018 - Dec 2020 (Expected)*

- **Coursework:** Data Structures & Algorithms Analysis, Advanced OOPS, Computational Problem Solving, Big Data & Visual Analytics, Cryptography & Data Security, R-DBMS, AI, Software Defined Networking

Dharmsinh Desai Institute of Technology — *Nadiad, India*

Bachelor of Engineering in Computer Engineering — *Aug 2014 - May 2018*

- **Coursework:** Computer Networks, Software Engineering, Microprocessors, Data Mining, Discrete Math, Service Oriented Architecture, UNIX Scripting and Tools, Operating Systems, Image Processing

Skills

Languages	**Proficient:** Python, Java | **Intermediate :** C | **Familiar with :** R, MATLAB, Assembly, Prolog
Web Technologies	HTML/CSS, JavaScript/jQuery, Bootstrap, JSON, REST-API, Node.JS, PHP
Database	MySQL, PostgreSQL
Other Technologies	Flask, AWS S3, Git, Tableau, Mininet, TensorFlow, Scikit-learn, Jupyter, Pandas

Work Experience / Internships

AMAZON — *Seattle, WA*

SOFTWARE DEVELOPMENT ENGINEER INTERN — *May 2019 - Aug 2019*

- Generated useful metrics to analyse Alexa's misidentification rate for phonetically similar words in customer utterances. Employed a combination of Levenshtien distance and phonetic algorithms (Soundex, Metaphone-3) to pinpoint the words. Metrics were used to improve Alexa's speech-to-text model.
- Devised an end-to-end, locale-based mechanism that automated and streamlined the existing manual and technical approach for adding items to Alexa's database. Tech stack consisted of Flask, AWS S3, REST API, JavaScript. Lead to noticeable reduction in development times of data associates

BHASKARCHARYA INSTITUTE OF SPACE AND GEOINFORMATICS — *Gandhinagar, India*

RESEARCH AND DEVELOPMENT INTERN — *Dec 2017 - April 2018*

- Implemented a web-based solution streamlining the operation of GeoServer right from workspace creation to shapefile rendering. Integrated custom REST API with underlying Geoserver API with a Java backend. Lead to noticeable reduction in the development times of BISAG scientists.
- Rendered shapefiles as full-fledged maps on Geoserver with added distance measuring and label marking capabilities. Shapefiles loaded in PostgreSQL 10.

Projects

FEATURE EXTRACTION FOR COMPELLING TALKS — *TensorFlow, Keras, OpenPose*

August 2020

- An ongoing work which will determine if there exists a correlation between the video features + gestures and the number of likes/views for Ted Talk videos via a regression model with LSTM (Long Short-Term Memory) + Attention.

AMAZON REVIEW ANALYSIS — *Python, Tableau*

April 2020

- Mined Amazon customer reviews for detecting trends and generating insights. Employed Birch clustering to group book reviews and SVM for classifying helpful reviews with 70% accuracy. Visualized trends and extracted underlying patterns via Tableau.

NET2TEXTQUERY — *Python, Flask, HTML/CSS, MySQL*

December 2019

- A web-based application facilitating query-based network traffic analysis. Inspiration drawn from Net2Text.

CUSTOM SDN CONTROLLER — *Python, Mininet, OpenFlow*

November 2019

- Designed and implemented a from-the-scratch Software Defined Networking (SDN) Controller in Python mimicking (minimal) functionalities of Ryu, OpenFloodLight. Deployed the network via Mininet and Oracle VM via the OpenFlow protocol.

EXPLORING DISCOURSE IN REDDIT — *Pandas, Scikit-Learn, TensorFlow*

January 2019

- Pitted Neural Networks against a gamut of classifiers such as Naive Bayes, Decision Trees, SVM in classifying posts into subreddits. Accuracies were reported in the range of 85-90%. Neural Networks outperformed classifiers when data was scaled.

DATA STRUCTURES AND ALGORITHMS VISUALIZATION — *JavaScript, SVG.js, jQuery*

April 2017

- An interactive tool with a clean GUI aimed at learning popular data structures/algorithms asked in tech interviews. Deployed live.