

# Siddharth Mal

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## OBJECTIVE

Being a self-motivated **Master's** student from University of Central Florida, I am seeking a **full time opportunity** in **IT/ Software Engineering/ Development/Web Development** fields. I have experience in developing different applications in the full life cycle of the software design process including requirements, analysis, design, interface implementation, testing and maintenance in **Agile methodology, Full Stack, and MERN Stack**.

## EDUCATION

### University of Central Florida, Orlando, Florida

Master of Science, Computer Science

Aug 2019 – May 2021

GPA- 3.917/4

**Relevant Course Work** - Design & Analysis Algorithms, Advanced Computer Architecture, Computer Vision, Advanced Text Mining, Machine Learning, Advanced Artificial Intelligence, Data Intensive Computing.

### Savitribai Phule Pune University, Pune, India

Bachelor of Engineering, Computer Science Engineering

Aug 2015 – June 2019

GPA- 7.3/10

## SKILLS

**Languages:** Python, Java, HTML/CSS, JavaScript, C++ | **Databases:** Oracle SQL, SQL Server, Mongo DB, Elasticsearch | **Frameworks:** Spring, Express.js

**Cloud Applications:** Google Cloud, Amazon Web Services, Firebase | **Android Applications:** React Native, Android Studio

**Soft Skills:** Collaboration, Research, 14 Leadership principles | **Libraries:** React.js, NumPy, Scikit-Learn, TensorFlow, OpenCV, Spacy, Pandas, Pytorch

**Tools and Runtimes:** Node.js, Agile Tools, Visual Studio, Git, Docker, VMware, HDFS, YARN, Spark, ELK stack | **Architecture:** SaaS, SOAP, REST

## RELEVANT EXPERIENCE

### Teaching Assistant in University of Central Florida, Orlando, FL

Aug 2019 – Present

**CS1 & C/C++ Programming Lab** – For undergraduate CS students to implement basic data structures.

- Supervising and assisting 500 students to solve programming exercise based on Linked Lists, Stack, Queue, Trees, etc.
- Providing doubt clearing sessions and responsible for grading assignments, class participation, and exams.

## PROJECTS

### Real time Streaming and Sentiment Analysis

Nov 2020

Scraping out live streaming of tweets from **Twitter API** (tweepy) related to the presidential elections and sentiment analysis of the candidates.

- Use of Transformation function on 30,000 tweets with **PySpark Streaming** on geolocation and sentiment analysis in RDD stream batches.
- Implemented **Accumulators** on RDD batches and perform sentiment analysis using **Textblob** to extract sentiment polarity.
- Applying **ELK stack** (Elasticsearch, Logitash, Kibana) to store data using Elasticsearch and visualizing using Kibana dashboard.

### Amazon Apparel Recommendation System

Apr 2020

Content-based recommendation on title, text, description text, and images using Amazon dataset.

- Text preprocessing and Feature Selection **183,000** datapoints, having **19** features each using text-based techniques - **Bag of Words**, **IDF**, **TF-IDF** and Text Semantics based techniques - **Average Word2Vec**, **IDF weighted Word2Vec** on text features of the datapoints.
- Incorporated **Transfer Learning** using **VGG 16** on 4096 channels to further optimize and produce 20 best recommendations.
- Performed **A/B testing** on multiple models to see which model outperforms based on Euclidean Distance and Cosine Similarity.

### Cache and Branch Predictor Simulator

Feb 2020

- Implemented branch predictor simulator for 3 branch prediction techniques - **Bimodal**, **Gshare** and **Hybrid** in **GCC compiler** using C++ for 1- and 2-way associativity with **100 % validation** and mystery run for 100 log files.
- Implemented **L1** and **L2 cache** simulator for 3 cache policies - **LRU**, **FIFO** and **Optimal** Cache in GCC compiler using C++ with **94 %** validation on 100 log files.

### Natours (Tour Management App) - <https://damp-bayou-78214.herokuapp.com/>

Oct 2019

An application to showcase tour plans information where users can sign up, login, book and visualize multiple tours using **Mapbox** Api.

- Advanced authentication and authorization (including password reset), sending emails using **Sendgrid** and uploading files.
- Encryption, sanitization, rate limiting, credit card payments with **Stripe API**.
- CRUD operations with **MongoDB** and **Mongoose**, testing using **Postman** and Server-side website rendering with **Pug** templates.
- Integrating frontend with backend by implementing **REST** architecture and **MVC** framework and utilizing **AJAX**, **Jquery** with **NodeJS** by deploying in Heroku.

## PUBLICATION

**Survey Paper – Fraud Detection and Pattern Matching in Insurance Medi-Claims (IRJET)**

<https://www.irjet.net/archives/V6/i1/IRJET-V6I1104.pdf>