# Sumukh S

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## **EDUCATION**

#### **IIIT, HYDERABAD**

MS (RESEARCH)

COMPUTER SCIENCE, NLP

Advisor: Dr Manish Shrivastava

Lab: MT-NLP lab. KCIS

Expected June 2021 | Hyderabad, IN

B.Tech (with Honors)
Computer Science

Expected June 2020 | Hyderabad, IN

#### **VVS SARDAR PATEL**

HIGH SCHOOL | BANGALORE, IN Science and Electronics

## **CONTACT**

Github: nonejk LinkedIn: sumukh-s Skype: link

#### COURSEWORK

Natural Language Processing (1 & 2)
Information Retreival and Extraction\*
Opimization Methods
Statistical Methods in AI (Intro to ML)
Speech Technology
Database Systems
Distributed Systems\*
Compilers\*
Artificial Intelligence
Computer Graphics
Computer Networks
Operating Systems
Data Structures and Algorithms

## **TECHNICAL SKILLS**

Programming languages:
Python • C • C++ • Bash

ML/DL/NLP:

PyTorch, NLTK, scikit-learn

Others:

Git • LaTex • OpenGL • MySQL • Matlab

• Flask • JS • HTML • CSS • MongoDB

## **AWARDS**

Best review paper, Algorithm course, 2017 Indian National Mathematics Olympiad (INMO) Finalist, 2011

#### **EXPERIENCE**

#### INDIAN SCHOOL OF BUSINESS (ISB) | ML & SWE INTERN

Aug 2019 - Present | Hyderabad, IN

• Working with Center for Analytical Finance (CAF) to create tools for loan approval process automation and bank transaction analysis using statistical machine learning algorithms.

#### IIIT-H NLP LAB | UNDERGRADUATE RESEARCH ASSISTANT

Apr 2018 - Present | Hyderabad, IN

• Currently working on extraction of key elements from unstructured legal documents. Previously worked on multimodal representation for Visual Question Answering [VQA]. Created webapps to showcase different models.

#### **ONWARD ASSIST** | Data Science Intern

May 2019 - June 2019 | Hyderabad, IN

• Worked on identification of cancer in liver tissue WSIs & segmentation of affected areas using deep learning algorithms for computer vision.

### MARKETFRONT SOFTWARE SOLUTIONS | SWE INTERN

Aug 2017 - Nov 2017 | Hyderabad, IN

• Led a team of 3 and built an android application, a webapp and a RESTful API for the clients to fetch and update details of the products in their inventory.

#### **PROJECTS**

## CROWD FLOW PREDICTION AND CLIENT DISCOVERY USING WIRELESS NETWORKS | Python, C, Raspberry Pis

Big Data and Policing | Spring 2019

Developed a system to identify crowd patterns by WiFi requests sent by mobile devices and triangulate client locations with WiFi routers. This data was also used to create heat-maps and perform time series analysis using ARIMA and Prophet.

#### WIKIPEDIA SEARCH ENGINE | PYTHON

Information Retrieval & Extraction | Monsoon 2019

Uses Block-Sort-Based-Indexing to create the inverted index of the entire WikiPedia dump (73.3 GB), queries on the index and retrieves top 10 results via relevance ranking of the documents, implemented using tf-idf scoring.

#### CUSTOM LANGUAGE COMPILER | C++

Compilers | Monsoon 2019

Developed a fully functional back-end of the compiler for a custom programming language, similar to C. Built parser, scanner, abstract syntax tree, interpreter for generating intermediate representation (LLVM IR) code for an input code file.

#### MINI-DROPBOX: P2P FILE SYNC | C++

Computer Networks | Spring 2018

Implemented an Application Level program for a P2P-network to keep two separate directories synced, similar to Dropbox. Used sockets to communicate; maintained file-indices, and MD5 hashes on all peers.

#### LINUX SHELL | C

Operating System | Monsoon 2017

Command line interpreter which supports background jobs, environment variables, signal catching, piping and redirection with extensive error-handling.

#### OTHER PROJECTS | [LINK]

Ultimate Tic-Tac-Toe bot (Python), Pacman killer like game (2-D) & Legend of Zelda (3D) like game (C++, OpenGL), HTTP proxy server with cache (Python), Quiz webapp (Ruby on Rails), SQL Engine (Python).