VATSAL SONI

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EDUCATION

MTech in Computer Science and Engineering, **IIIT Hyderabad** CGPA: 9.35	2018-2020
B.E in Computer Engineering, **L.D.C.E Ahmedabad** CGPA: 8.76	2014-2018
H.S.C 12th, **Shree Ganesh Vidyamandir School, Ahmedabad** 79.60%	2012-2014
S.S.C 10th, **Shree Ganesh Vidyamandir School, Ahmedabad** 83.60%	2011-2012

WORK EXPERIENCE

Qubole: SDE Intern   May 2019 - July 2019

· Developed Terraform templates for building and managing infrastructure on Aws and Azure cloud. Integrated these templates in Python using the pyTerraform library to provide a command-line interface.

IIIT Hyderabad: Teaching Assistant   Aug 2019 - Nov 2019

· Worked as a TA for the course Advanced Problem Solving(CSE603) under Dr.Avinash Sharma. Designed Algorithmic/ Competitive/ Advanced data structure questions as a part of lab work and assignments.

PROJECTS

Distributed AI on the Edge Platform

· Built a Distributed AI on the Edge Platform that is capable of managing & deploying TensorFlow models using TensorFlow serving. The platform was built using micro-service based architecture with features like auto-scaling, scheduling, centralized logging, monitoring, notification, high-availability and fault tolerance.

Wikipedia Search Engine

· Implemented a search engine on the Wikipedia dump of size 73.4 GB. Invert indexing is implemented for fast retrieval, and Relevance ranking algorithm is implemented using the TF-IDF score to rank documents. Creating an index takes around 14 hr on a given Wikipedia dump. The result is retrieved in less than 1 second.

Mini Bit Torrent File Sharing System

· Developed p2p file transfer protocol to share data over the network. Used multithreading and synchronization to achieve concurrency and consistency of data. Developed modules to create mtorrent file, download file, share file and stop sharing file.

Inode Based Linux File System

· Developed an Inode based virtual file system on top of the Linux file system. Implemented multi-level file indexing mechanism to overcome external fragmentation. It supports operations like creating disk, mounting disk, unmounting disk and create file, delete file, open file and close file.

Hashtag Generation

· Designed and implemented a multi-modal hashtag generation pipeline that suggests new hashtags for an Instagram post with images & text. The approach used CNN for image classification and glove-embeddings for recommending semantically similar hashtags.

SKILLS

Programming: C, C++, Python, Bash, SQL
Web Skills: HTML, JavaScript, CSS, Flask Framework

ACHIEVEMENTS

· Topped the Deans List for M.Tech 2018 (1st Rank in Sem-1).
· Secured AIR 1572 out of 1,07,893 in GATE Examination.
· Completed Machine Learning Course by Stanford University from Coursera.