TUSHAR PATIL

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EDUCATION

M.Tech - Computer Science and Engineering

IIIT Hyderabad

July 19 – June 21 (expected) **CGPA: 8.06**

B.E. - Computer Science and Engineering

Savitribai Phule Pune University

July 12 – Oct 16 **Percentage: 66% (Distinction)**

WORK EXPERIENCE

Internship Experience

MathWorks (Engineering Development Group Intern)

May 2020 - July 2020 Hyderabad,India

- **Worked on enhancement of Robotics system toolbox.**
  - Analysed the requirements of the clients and made the toolbox more modular thus making it faster and space efficient.
  - Removed the dependencies by adding appropriate APIs.
- **Path Planning**
  - The work was focused on path planning for autonomous robots.
  - It involved making a 2D occupancy grid as well as 3D mesh from the sensor data in real time.
  - Using this a robot could construct the grid/mesh on the go and navigate accordingly.
- Technologies used: Gazebo simulator, C++.

Work Experience

Capgemini (Software Engineer)

April 2017 - May,2018 Mumbai,India

- Developed Chabot backend logic for various clients as per the requirements.
- Used machine leaning concepts like TFIDF vector, Cosine similarity for optimised results.

Volunteering

Student Placement Coordinator - IIIT Hyderabad

December 2019, present IIIT-Hyderabad

SKILLS

- **Programming Languages and Tools**
  C, C++, Python, MySQL, MongoDB, Kafka,Docker, Flask, Lex, YACC, ANTLR.
- **Platforms**
  Linux, Windows

ACADEMIC ACHIEVEMENTS

- **95.67%** in Graduate Aptitude Test in Engineering (CSE).

RELEVANT COURSEWORK

- Advance Problem Solving, Scripting and Computing Environments, Operating Systems, Statistical Methods in AI, Database Systems, Internals of Application Servers, Compiler Design.

PROJECTS

AI on Edge

- Developed an IOT Platform for real time monitoring system.
- Admins can register various types of sensors with their properties, and developers can upload and run/schedule IOT based algorithms on them.
- The platform takes care of validating code, creating virtual environments, load balancing,sensor binding and functionality of showing real time output which then can be used to take particular action.
- **Technologies used:** Python, kafka, Docker, Flask, MongoDB.

MINI TORRENT

- Built a file sharing system with multi-tracker functionality.
- It provides support for fault tolerance and parallel downloading.
- **Technologies used:** C++, Pthread.

POSIX SHELL

- Built a Linux shell with an extensive feature set similar to that of BASH.
- It has a good mix of various OS concepts like signals, pipes, process handling and various other system calls.
- **Technologies used:** C++.

WIKI SEARCH ENGINE

- Implemented a search engine to perform queries over Wikipedia data dump.
- Technique used : Multi-level indexing, ranking algorithms and multithreading for parallel processing of queries.
- **Technologies used :** Python

SLAB ALLOCATOR

- Implemented efficient memory allocator than malloc.
- It exploits object caching mechanism to reduce the time required for object initialization.
- **Technologies used:** C++

PUBLICATIONS

Migrate and Map: A framework to access data from MySql, MongoDB or HBase using MySql queries.

- **Tushar Patil**, Piyush Nikam, Gayatri Hungund, Aditi Talegaonkar, Ankit Pagar."Migrate and Map: A framework to access data from MySql, MongoDB or HBase using MySql queries"
- Publisher : IOSR Journal of Computer Engineering (IOSR-JCE).