**Manasa Katta | CS19B022 | INDIAN INSTITUTE OF TECHNOLOGY MADRAS | PR/11/CS/23/022**

|  |  |  |  |
| --- | --- | --- | --- |
| **EDUCATION AND SCHOLASTIC ACHIEVEMENTS** | | | |
| **Program** | **Institute** | **% / CGPA** | **Year** |
| B.tech in Computer science and engineering | Indian Institute of Technology, Madras | 6.66 | 2023 |
| Class X(SSC) | Viswabharati high school, Gudivada | 10 | 2019 |
| Class XII (BIEAP) | Narayana junior college, Vijayawada | 97.6 | 2017 |
| **SCHOLASTIC ACHIEVEMENTS** | * Secured All India Rank of 1033 among 2.5 lakhs+ students in **JEE Advanced 2019** * Secured All India Rank of 2070 among 15 lakhs+ students in **JEE MAINS 2019** * Secured state rank of 106 among 1.8 lakh+ students in **AP EAMCET 2019** | | |

|  |
| --- |
| **RELEVANT COURSE WORK** |
| |  |  |  | | --- | --- | --- | | Discrete Mathematics | Pattern recognition and machine learning | Principles of Economics | | Probability, Statistics and Stochastic Process | Artificial Intelligence | Industrial economics | | Problem Solving using Computers | Paradigms of Programming | Languages machines and computation | | Basic Graph Theory | Programming and Data Structures | Compiler Design | | Computer Systems & Design | Design and Analysis of Algorithms | Operating Systems | | Computer Architecture | Database Management systems | Computer Networks | | Security in cyber physical systems | Theory and applications of Ontologies | Wireless communication | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **LABS**   |  |  |  | | --- | --- | --- | | Programming and Data structures | Object oriented programming lab | Compiler design | | Foundations of computer system design | Computer Organization and Architecture | Operating Systems | | |
| **SKILLS**   |  |  | | --- | --- | | Languages | C, Cpp, Python, SQL,Scala ,Ocaml, Prolog, Latex, 32-bit x86 Assembly | | Big Data Skills | Hadoop, Spark, Hive, NiFi, Kafka, Airflow | | |
| **PROFESSIONAL EXPERIENCE** | |
| **Data Engineer** (Jio Platforms Limited) (Aug’23-Present) | * Given jioTV data of customers profile details, containing two tables one for inidividual data and another for corporate data. I have joined the two tables based on customer id and written to csv using spark and the csv stored in hdfs is sent to SFTP server using NiFi flow   + Made hive script to create external table on top of csv   + Written shell scripts to run the spark code and hive scripts   + Created and scheduled dags to create table once, and update the table daily   + Generated and analysed stats of spark-jobs in production and checked the health of job using yarn, wxm and grafana * Given jio Cinema data, exploded the data in a json column into multiple columns using UDFs in spark, and created table on top of it and extracted the list of top 3 actors, top 3 directors using rank in sql * Read data from kafka topic using spark as key-value pairs, extracted the values in json format and splitted into columns and stored into hdfs location. * A table in jiomedia has less than 100 rows. So it has to be saved in mysql server instead of hive. Made a connection request to mysql server, created table there and inserted data into it from dataframe. |
| **SWE intern**  (Samsung R&D Delhi)  (May’22-Jul22) | * Generated a qrcode scanner using python which generates qrcode to a javascript code taking input as javascript and outputs qr code to the corresponding javascript code. * Generated javascript code by scanning qr code corresponding to it. * Analysed about the ott services and the interests of people in various contents based on their nature. * Prepared a report suggesting which content will be best in otts based on interests of people and using statistics of various otts like amazon prime, netflix, hotstar, voot etc. |
| **COURSE PROJECTS**   |  |  | | --- | --- | | **Compiler Design Course**  (Aug’21-Nov’22) | * A 5-pass compiler implemented in Java, translating a MiniJava program to increasingly lower abstraction forms, finally resulting in MIPS assembly language. * It also performed type-checking, intermediate code generation & optimized register-allocation. | | **Computer Architecture**  (Jan’21-May’21) | * Simulated a 5 stage Scalar Pipelined processor based on RISC architecture using C++. * Each stage is simulated in parallel using multithreading to speed up overall execution. * Simulated a single level cache that uses Random, LRU & Pseudo LRU replacement policies. | | **Smart Sensing for IoT** (Jan-May’23) | * Calculated heart beat of a person using Smartphone based Photoplethysmography. Captured videos after various activities and calculated heartbeat for each activity using intensities of each frame and also calculated the optimal threshold for each activity. Plotted ROC curves and histograms for data. * Using 2 ESP32, gathered CSI data for various cases such as 0,1,2,3,4 people present in between transmitter and receiver both static and dynamic. Using CSI amplitudes, created images and then flattened images and used to svd to reduce dimensions of flattened images. Then using k-means clustering, classified the live data as vacant/non-vacant, static/dynamic. | | **Pattern Recognition& Machine learning**(jul-nov’22 | * Implemented logistic regression, Decision trees, SVM, Random Forest Classifier, Adaboost, KNN, Binary Bayes classifier and multiclass bayes classifier, neural networks in python. | | **Database Management Systems**(jul-nov’22) | * Using MYSQL, created database for donation box which is chosen as domain. Populated data and implemented SQL queries on it. | | |
| **POSITION OF RESPONSIBILITIES** | |
| **Shaastra 2020-2021** | * Shaastra 2021, Design and Build Vertical coordinator for Online Bridge Design Contest. Guided the participants, coordinated with them, collected their designs and evaluated using Bridge Design Software. |
| **Ethnic Day 2023** | Managed 6000+ people on ethnic day. Lead a team of 10+ students and managed the events logistics. |