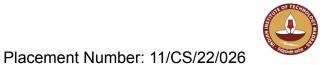
M Venkat Rahul | CS18B026

Aug '20 - Nov '20

Indian Institute of Technology Madras



| EDUCATION | | | | |
|------------------|---------------------------------------|--------|------|--|
| Program | Institution | %/CGPA | Year | |
| B.Tech. CSE | Indian Institute of Technology Madras | 8.92 | 2022 | |
| XII | Mount Carmel School, New Delhi | 91.6% | 2018 | |
| X | Mount Carmel School, New Delhi | 10/10 | 2016 | |

| XII X | Mount Carmel School, New Delhi Mount Carmel School, New Delhi | 91.6% 10/10 | 2018 2016 |
|--|--|-------------------------|---------------|
| A | WORK EXPERIENCE | 10/10 | 2010 |
| American Express SDE Intern May '21 - July '21 | Developed microservices for high speed transaction process Leveraged technologies such as <i>Spring, Kafka, Apache Ignite</i>, achieve processing speed of over a million transactions/sec Enabled automated end-to-end & regression testing using <i>XL Re</i> Suggested several optimisations and alternatives to improve lateral | and Cassandra elease | |
| Ayu Devices ML Intern Dec '19 - Jan '20 | Implemented LSTM based model to detect cardiac murmurs using Tensorflow Filtered PCG input via pre-processing techniques: Springer algorithm & HMM Enabled cardiac output noise reduction using Singular Value Decomposition | | |
| | PROJECTS | | |
| Real Time Sign Language Recognition ^(self) Jun '20 - Jul '20 | Built a real-time sign language recognition model with latency << 1 second, based on CNN's using <i>Keras</i> and <i>OpenCV</i> libraries Applied adaptive skin segmentation to filter out different hand-signs from the background Performed pre-processing techniques for edge-detection, de-noising and image contrast enhancement | | |
| Operating Systems : Scheduling (course project) Aug '20 - Nov '20 | Improvised kernel's scheduler by implementing priority scheduling, using run-queues Load balancing of processes based on heuristics such as avg. sleep time and static priority Supports lazy memory allocation, and copy-on-write Implemented common Linux commands such as ls, touch, mkdir, and cat for ease of use | | |
| Mini C Compiler (course project) Aug '20 - Nov '20 | Developed a compiler for a subset of the C language using Lex a. Implemented lexical analyzer, abstract syntax tree constructed and code optimizer | | de generator, |
| GPU Programming (course project) Aug '20 - Nov '20 | Implemented high performance bipartite matching algorithm for Achieved 20X speed-up over CPU runtime on large data sets of | | |
| Computer Architecture (course project) Aug '20 - Nov '20 | Implemented privilege switching, exception handling, and inter Modified boot-up routine to set up page tables and physical men | <u>=</u> | - |
| Othello Game Bot (course project) | Developed an Othello game bot with over 80% win probability Supports game tree searches upto a depth of 8-10 moves ahead | - | |

SCHOLASTIC ACHIEVEMENTS

leveraging alpha beta pruning algorithm and other game specific heuristics

- Secured All India Rank 759 in JEE Advanced 2018 and All India Rank 1403 in JEE Mains 2018
- Recipient of the KVPY Fellowship award securing All India Rank 664 in 2017 and All India Rank 485 in 2016
- Recipient of the NTSE scholarship conducted by NCERT securing State Rank 54 in 2016
- Recipient of the **JSTSE** scholarship conducted by Govt. of Delhi securing *State Rank 11* in 2015

| | COURSES | |
|--|-------------------------------|--------------------------------------|
| Introduction to Databases | Operating Systems | Artificial Intelligence |
| Computer Networks | Compiler Design | Graph Theory |
| Secure Systems Engineering | Analysis of Parallel Programs | Programming and Data Structures |
| Pattern Recognition & Machine Learning | Paradigms of Programming | Computer Organization & Architecture |

| | SKILLS |
|-------------|--|
| Programming | : C/C++, CUDA, Python, Java, OCaml, Prolog |
| Tech Stack | : Kafka, Spring, Ignite |