# RAADHES CHANDALURU | CS22B069

**4th Year Computer Science & Engineering IIT Madras**

CGPA: 9.69/10 GitHub LinkedIn Website

## Education

- **Indian Institute of Technology Madras** — Chennai, TN
  B. Tech - CSE: **CGPA: 9.69/10** — *Nov '22 - May '26*
- **FIITJEE Junior College & School, Madhapur** — Hyderabad, TS
  Class 12: **97.16%**; Class 10: **CGPA: 10/10** — *May '19 - Jun '22*

## Relevant Experience

**Optiver Services B.V** — Amsterdam, NL
**Quantitative Trading Intern** — *May '25 - Jul '25*

- **Among 3** Quant interns from IIT Madras (13 from India).
- Achieved **highest PnL** of 20K€ on final day of simulated trading Eurostoxx 50 options.
- Achieved **highest Sharpe ratio** among 21 Quant interns in research project based final submission by trading spread of QQQ - SPX options based on EMA analysis.
- Developed pipeline framework to filter volatility curve data based on expiries (used by all project team members), calendar visualiser for expiries, strategy performance analysis code, and video-based volatility curve visualiser.

**Tower Research Capital, North Moore** — Gurgaon, IN
**Quant Dev Intern (Recieved return offer)** — *Dec '24 - Jan '25*

- Built a historical data feed in C++; resulting in 2-10x improvement on simulations.
- Optimised with basic async threads, SIMD, inlining, unrolling, branch flags, and modification of data storage utilising profiling tools such as perf and valgrind.
- Gained expertise in shell scripting, CMake, and working on large existing codebases.

**Jane Street Capital, LLC** — Hong Kong SAR
**SEE : IIT Program** — *Dec '23*

- **Among 6** students selected from IIT Madras (Approx. 45 from IITB, IITD, IITM).
- Built the backend and UI for a Game with OCaml and libraries used at Jane Street.
- Learnt Jane Street's quant trading approach via lectures, games, and workshops.

**Teaching Assistant, Data Structures Lab** — *Aug '25 - Present*

## Major Technical Projects

**Linux system calls**
Course Project - **Prof. D Janakiram**

- Independently **modified**, **compiled** and **booted** (qemu and oracle vbox) **linux** 5.19 and 6.0.7 kernels with 4 custom syscalls.
- Collaborated in designing 20+ memory, file and process related syscall wrappers and implemented user-space hooking.

**Cache Oblivious Algorithms**
Project under **Programming Club, CFI**

- Implemented matrix multiplication using **tiling optimisation**, achieving a maximum time improvement of 64.5% on matrices of size 1500 x 1500.
- Implemented the **Cache Oblivious Priority Queue** based upon a **research paper** and tested it upon Dijkstra and Prims algorithms.

**Research Project**
Project - **Prof. KC Sivaramakrishnan**
Studied the **OCaml** garbage collector to explore integrating a different collection algorithm.

**Undergrad Research Project**
Project - **Prof. Rupesh Nasre**
Researching the implementation of louvain community detection algorithm.

**CPU Design from Logic Gates**
Course Project - **Prof. Ayon Chakraborty**

- Designed a 8 bit CPU with 12 instruction ISA to perform 8 bit operations with custom ALU supporting 5 operations on CircuitVerse.
- Formed modules for CPU Controller using 21-bit control bits, Instruction register, Program Counter, and Instruction decoder.

**Stock Dash App**
Personal Project
Python based Dash App plotting candle sticks & indicators with **yfinance API** data.

**EBPF Warden**
Course Project - **Prof Chester Rebeiro**

- Monitored syscalls using EBPF to detect malicious activity.
- Prevented fork bombs with process termination & rate limiting.

**Data Science**
Course Project - **Prof. Ramanathan**

- Implemented models for **Generic Neural Network, K means Clustering, Logistic Regression, Linear Regression** from scratch.
- Leveraged sklearn **Support Vector Classifier** model to classify digit images with 99% accuracy and the Iris dataset with 79% accuracy.

**Matching Engine for Market**
Personal Project
Implemented a simple matching engine for a market server and created a terminal-based client to place buy & sell orders in Java.

**Backend and UI for games**
Personal & Course Mini Projects

- **Unbeatable** tic-tac-toe bot.
- Built a browser 2048 game using **javascript**, **HTML** and **CSS**.
- Built a real time **client-server** ping pong game for 2 players.
- Mario game with pygame library.

**Mini - C Compiler**
Course Project - Rupesh Nasre
Target: 32-bit x86 asm; flex & bison.

**Progress Automations**
Personal Project

- Automated CSES practice tracking with **selenium** and **gsheets API**.
- Automated assignment reminders for classmates using Gmail API and google apps script.

## Coding Achievements

- **Highest Rated 4th year student at IITM** on Codeforces with a rating of **1942 (Candidate Master)**.
- Max Rating of **2062 (5 Star)** on CodeChef.

- **Among 33** Indian teams in **ICPC Asia West Finals** Mar '25.
- **India Rank 17** and **Top IIT Madras team** in ICPC Amritapuri Regionals Dec '24. Only 2026 graduating team to ever proceed to regionals from IITM.
- Secured **India Rank 10** and **Global Rank 85** among **10K+** participants in Codeforces Round 896 (Div 2).

- **Team Rank 1** in Freshie Coding Contest 2022, and **Rank 4** in Apprentice contest 2023 conducted by Programming Club IITM.
- Qualified for phase 2 of MetaHackerCup in 2023 and 2024.

## Scholastic Achievements & Others

- **Highest Score** in **System Design** and **Computer Organisation & Architecture** courses (among all CS22B' students).
- **Rank 16** in KVPY 2020 among **50K+** students.
- **Rank 143** in **JEE Adv.** '22 among **150K+** candidates.
- **Rank 310** in **JEE Mains** '22 among **1 million+** candidates.
- **Regional Rank 1, All India Rank 3** among **16K+** participants in NAEST round 2 & final respectively (Experimental Physics test).
- Conferred Shilpa Nanda Kumar Award by HC Verma and IAPT.
- Secured **Rank 3** in Telangana state in NTSE Stage - 1. Awarded NTSE scholarship based on NTSE stage - 2.
- **Top 30** in Telangana State in IOQM 2021 and selected for INMO (Indian National **Mathematical Olympiad**).
- Secured **India Rank 4**, **Global Rank 15** and **India Rank 2**, **Global Rank 28** in Physics Brawl Charles University 2022, 2023 among 3.5K+ contestants Globally.
- Secured **Team Rank 3** in AI to AI mathematics contest '22 - '23 based on probability and linear algebra at IITM.

- Completed **Akuna Capital** Options 201 (Invite-Only).
- Admitted as Research Consultant WorldQuant Brain.
- Improved 15+ basic alpha strategies on websim.

## Positions Of Responsibility

**Programming Club, CFI**

**CP Guild Lead** — *Apr '25 - Apr '26*
Strategist — *Apr '24 - Apr '25*
Coordinator — *May '23 - Apr '24*

- Selected & Managing 35 guild members instructing on advanced topics including DSU, suffix arrays, persistent segment trees etc.
- Instructed **500+ attendees** in summer programming camp '23 on greedy algorithms, prefix sums, frequency arrays & **150+ students** through offline sessions on Strings and Range Queries.
- **Automated coordinator practice analysis** by developing a google apps script integrated with **Codeforces API, Gsheets API**, and visualised on **google sites**.
- Set and tested original problems for 10+ coding contests.
- Managed the club's YouTube channel with **150K+ views & 4.5K+ subscribers**. Co-created 16+ editorials in tenure.

**CS Placement & Internship Cell, IIT Madras**
Deputy Coordinator — *May '23 - Apr '24*
Assisted 10 students and smoothly coordinated with 7 companies for outreach and interviews during Internships & Placement drives.

## Relevant Coursework

**Computer Science**

- Design and Analysis of Algorithms
- Object-Oriented Programming Lab
- Computer Organisation and Arch
- Secure Systems Engineering
- Database Management Systems
- Cloud Computing**
- Networks ; Wireless Networks**
- Compiler Design
- Operating Systems
- Data Science
- Machine Learning
- Deep Learning
- GPU Programming
- Program Analysis**

**Mathematics**

- Probability, Statistics and Stochastic Processes
- Multivariable Calculus
- Basic Graph Theory
- Series and Matrices
- Discrete Mathematics

**Others**

- Accounting and Finance
- Econometrics
- Principles of Economics
- Statistical Inference**

** : Ongoing

## Skills

- **Languages**: C++, C, Python, RISC V asm, OCaml, LaTeX; Familiar with: HTML, Java, JavaScript, HDL Verilog (basics), x86 asm.
- **Miscellaneous**: C++ STL; Flex & bison; Git; Gdb Familiar with: Numpy, Pandas, Matplotlib, Scikit-Learn.