

PULAK MALHOTRA

CSE undergrad at IIIT-H

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PulakIIIT

EXPERIENCE

Front End Developer

Wonkru

Jun 2020

- One of the founding members of the startup 'Wonkru' which has secured a grant of 1 lac at CIE@IIIT-H
- Designed and created the frontend with React (MERN Stack)
- Awarded 'Best Startup Idea' in SummerUp organized by E-Cell@IIIT-H

Open Source Contributor

Nov 2020

- Contributed to reverse engineering tools for RadareOrg
- Enhanced GUI for a disassembler written in C++ with QT framework

RESEARCH PROJECTS

Analysis of Computational Complexity of Video Games

- Worked in a team to prove the game Celeste is NP-Complete
- Proved that Celeste becomes P-Space Complete with a minor change

TECHNICAL PROJECTS

Creating a Unix Shell

C, Operating Systems, Make |

- Programmed a bash-like shell from scratch with modular code
- Implemented process management, piping, redirection and exit codes

Enhancing XV6 Kernel

C, Operating Systems, Make |

- Integrated PBS, FCFS and MLFQ scheduler to the MIT XV6 Kernel
- Analyzed the performance of the schedulers under different loads
- Added new user programs (Eg. 'time') and new syscalls to the kernel

Creating Concurrent Processing Models

C, Operating Systems |

- Programmed multithreaded merge sort which is up to 75% faster than single threaded or multiprocess mergesort
- Modelled real world problems with nuanced implementation of threads, Semaphores, mutexes and conditional variables

Crossy Road Game

Python, PyGame |

- Created a turn based game for two players, with difficulty increasing gradually until one player dies

EDUCATION

B.Tech in Computer Science and Engineering

International Institute of Information Technology

July 2019 – Present

CGPA : 9.33

Class XII (CBSE)

Doon International School

2017 - 2019

Per : 97.75%

SKILLS

Languages

C C++ Python HTML CSS
JavaScript Bash Latex

Technologies

React MySQL Git Flask
Arduino QT

ACHIEVEMENTS

- 99.91 percentile in JEE Mains
- 98.8 percentile in JEE Advanced
- Expert on Codeforces [1596 Rating]
- Developed Note-Taking android app at age 15 which has 2000+ downloads

COURSEWORK

Computer Science

- Data Structures and Algorithms
- Data and Applications
- Operating Systems and Networks
- Computer System Architecture

Mathematics

- Probability
- Linear Algebra
- Discrete Structures

Artificial Intelligence

- Machine Learning (Andrew Ng)
- Deep Learning Specialization (Andrew Ng)