



# SHUBHAM SARJERAO PHAPALE

Enrollment no : BT21CSE111

B. Tech - Computer Science and Engineering

Visvesvaraya National Institute of Technology, Nagpur

25/10/2003

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## EDUCATION

QUALIFICATION	INSTITUTE	YEAR	CGPA
B.Tech. CSE	VNIT Nagpur	Currently 4th	8.39 of 10
CLASS XII(HSC)	Maharashtra State Board	2021	82.17%
CLASS X(SSC)	Maharashtra State Board	2019	94.20%

## EXPERIENCES

- **Research Intern - VNIT Nagpur** (Oct 2023 - Present)
  - Working under Professor Poonam Sharma on Monitoring and modelling spatio-temporal urban growth using Cellular Automata and geoinformatics with application of Deep Learning and Image Processing.
- **Student Portal VNIT [WebApp] - WEB DEVELOPER** (July 2023 - Present)
  - Developing and Maintaining the Student Portal Website of VNIT with a team of 12 Members including 4 Alumni of VNIT.

**Tech-Stack:** Html, Css, Bootstrap, Javascript.

## PROJECTS

- **Assignment Management Software System [GitHub]** (February 2023 - April 2023)
  - Developed an Assignment Management Software System using C, implementing *linked lists* and later optimising it with *B-Tree* data structures to enhance functionality and reduce time complexity.
  - Managed student assignments progress and completion with a comprehensive tracking system.
- **Custom Unix Shell [GitHub]** (August 2023)
  - Developed an intuitive fully functional custom *Unix-like* shell in C with support for single, parallel, sequential, output redirection, and pipeline commands, enhancing command execution options.
  - Enhanced user control by integrating advanced signal handling for Ctrl+C (*SIGINT*) and Ctrl+Z (*SIGTSTP*).
- **Snake AI [GitHub]** (July 2023)
  - Developed an *AI agent* for the *Snake Game* using a Tabular Reinforcement Learning method, enabling the *agent* to learn and improve from past experiences.
  - Created the *Snake Game* environment and implemented the *Q-Learning* algorithm with *PyTorch*.
- **Personal Portfolio [GitHub]** (March 2024)
  - Developed a dynamic personal portfolio website using *html*, *css* and *JavaScript*. Currently integrating a database.

## TECHNICAL SKILLS

- **Programming Languages** : C, C++, Python, Latex.
- **Database** : MySQL.
- **Software Development** : Html, Css, JavaScript\*.
- **Developer Tools** : Git, Linux, Fusion360, Matlab, LLVM-slim, Unity Game Engine\*.
- **ML Tools** : NumPy\*, Pandas\*, Matplotlib\*, OpenCV, Scikit-learn\*. \* **Limited Proficiency**
- **Areas of Interest** : Cyber Security, Game Dev, Linux.

## POSITIONS OF RESPONSIBILITY

- **Member** Chess Club VNIT Nagpur.
- **Organiser** Axis'24 - technical fest of VNIT Nagpur.
- **Representative** for Junior Scientist VNIT Nagpur.
- **Organiser** National Entrepreneurship Olympiad.

## EXTRA CURRICULAR ACTIVITIES

- Won Silver medal in Chess and Handball and Bronze in Singing at Institute Gathering.
- Practiced Indian Classical Music for 10+ years.
- Practicing YOGA regularly since 2015.
- Conducted a webinar for students from village area regarding awareness about competitive exams.

## COURSEWORK

- **Operating Systems, Computer Networks, DBMS, Design and Analysis of Algorithms, Language Processor.**
- **Data Structures I & II, Object Oriented Methodology.**
- **Neuro Fuzzy Techniques, Theory of Computation, Concepts in Programming Languages, Discrete Mathematics.**
- **Image Processing, Linear Algebra, Probability & statistics.**
- **Machine Learning [Certificate].**
- **Neural Networks and Deep Learning [Certificate].**

## ACHIEVEMENTS AND HONOURS

- Secured Maharashtra rank **43** in **MHTCET** 2021.
- Among **Top 1 Percent** in **JEE mains and Advanced** 2021.
- Scored **325/450** marks in **BITSAT** for BITS Pilani 2021.
- Among **Top 5** Competitive Programmers of VNIT on CF.