

# DEEPTI S DESHPANDE

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## About Me

Dedicated and passionate about technology, with a solid foundation in programming, data structures, and computer systems. Gained hands-on experience through academic projects, applying technical skills to solve real-world problems. Eager to continue learning and innovating, with a goal of becoming a reliable and effective professional.

## Education

### J S S Academy of Technical Education, Bengaluru

B.E. in Information Science and Engineering

Nov. 2022 – June 2026

Bengaluru, Karnataka

**CGPA: 8.41**

### Relevant Coursework

- Data Structures
- Algorithms Analysis
- Operating Systems
- Database Management
- Object-Oriented Programming
- Computer Architecture

## Projects

### AI-Augmented Kernel for Resource Optimization — Python, cgroups, Machine Learning

Aug. 2024 – Oct. 2024

- Developed a Random Forest model to forecast CPU usage patterns, utilizing real-time system metrics collected via the `psutil` library.
- Implemented Linux control groups (cgroups) to dynamically manage and allocate system resources based on predictive insights, validated through stress testing to ensure enhanced CPU stability under varying workloads.

### Performance Analysis of Quick Sort Algorithm Using gem5 Simulator(On-going)

March 2025

- Simulated Quick Sort Execution: Utilized the gem5 architectural simulator to execute the Quick Sort algorithm, enabling detailed analysis of its performance characteristics.
- Analyzed CPU Performance Metrics: Examined key CPU metrics such as instruction counts, cache hits and misses, and branch prediction accuracy to identify performance bottlenecks

## Technical Skills

- **Languages:** JavaScript, Python, SQL, Java, C,C++, HTML, CSS
- **Tools:** Git, GitHub, VS Code
- **Concepts:** Machine Learning

## Extracurricular

2024 – Present

- Represented in the Visvesvaraya Technological University (VTU) Intercollegiate Badminton Tournament 2024, advancing to the semifinals.