

# Shobith PS

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## ABOUT ME

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Final-year Computer Science Engineering student with strong knowledge of data structures, algorithms, software development, and computer fundamentals. Passionate about technology and eager to apply my skills to real-world challenges and large-scale projects.

## EDUCATION

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### PES University

*Bachelor of Technology in Computer Science and Engineering — CGPA: 8.28/10*

Bengaluru

*Nov. 2022 – Current*

### Vidyaniketan PU College

*II PUC — Percentage: 97.2*

Bengaluru

*Apr. 2020 – Mar 2022*

### Vidyaniketan Public School

*CBSE Class X — Percentage: 86*

Bengaluru

*Jul. 2013 – Mar 2020*

## TECHNICAL SKILLS

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**Languages:** Python, SQL, Java, C/C++, Golang, Javascript, MongoDB

**Frameworks:** React, Next.js, Node.js, Flask, FastAPI, Pandas, NumPy, Pytorch

**Developer Tools:** Git, Docker, VS Code, Kubernetes

**Big Data Technologies:** Hadoop, Kafka, Pyspark

## PROJECTS

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### Real-Time Code Execution Engine | *React, FastAPI, Kafka, Docker, Redis*

- Built a real-time, multi-language code execution platform (React + FastAPI) using Kafka queues, Docker sandboxes and Redis — supported 500–1,000 concurrent users with sub-second output latency.
- Implemented a fault-tolerant producer–consumer pipeline with Docker consumers and chunked I/O for secure, low-latency execution.

### Distributed File Orchestration and Synchronization for Linux | *Python, React, Web Sockets, HDFS*

- Built a distributed file orchestration system with HDFS, enabling put/get/read/delete operations and synchronization across multiple Linux clients.
- Designed a real-time client–server architecture (Python Socket.IO + React) with 200 ms latency and scalability to 50+ concurrent clients handling multi-GB file transfers.

### DSA Tutor | *Next.js, RAG, Node.js*

- Built an interactive tutor with visualizers, stepwise hints, and guided questions that help students learn DSA concepts by solving problems themselves.
- Implemented RAG using FAISS, sentence-transformers/all-MiniLM-L6-v2 embeddings, and a local google/flan-t5-small model to deliver top-3, source-attributed, context-aware answers.

### SnapConnect - A Social Media Application | *React, SQL, NodeJS*

- Built a full-stack social media app (React, Node.js, SQL) with user auth, posts, likes, comments, and follow/friend features — used stored procedures, functions, and triggers to enforce data integrity and handle workflows like follow/unfollow and cascading deletes.

## EXPERIENCE

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### Python Teaching Assistant

Aug 2025 – Current

Assisting in conducting lab sessions, clarifying Python programming concepts, and supporting students with debugging and assignments for the undergraduate course.

### Hackathon Participant

Actively participated in campus and national-level hackathons such as HackFest (Nitte), Algomania 2.0, and ISFCR Hackathon, building collaborative and innovative solutions.

## CERTIFICATIONS AND ACHIEVEMENTS

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- Machine Learning A-Z (Udemy)
- Problem Solving – Intermediate Level (HackerRank)
- Solved 400+ Data Structures and Algorithms problems across platforms