Sachin Kumar

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Education

- **Sharda University (SU)** — UP, India
  Bachelor of Technology - ECE; GPA: 7.0 — *2022 - 2026*
- **K.P.S Memorial High School** — Bihar, India
  Class XII - CBSE; Percentage: 62% — *2022*
- **St. Jhon's Higher Secondary School** — Mizoram, India
  Class X - MBSE; Percentage: 72% — *2020*

Skills

- **Languages**: C, C++, Java, Python, JavaScript, HTML, CSS, MySQL, Typescript
- **Frameworks**: ReactJS, Tailwind CSS, NodeJS, ExpressJS
- **Database**: PostgreSQL, MongoDB
- **Others**: Git, Github, Matlab, VScode, Vim, Cursor, System Design(HLD)
- **Soft Skills**: Leadership, Emotional Intelligence(EQ), Communication Skills, Teamwork, Adaptibility, Problem-Solving Mindest

Experience

- **WebExpert Software** *(Certificate 1&2)* — *May'25 - July'25*
  - Built **REST APIs** with **Node.js** & **Express** (routing, middleware, request handling).
  - Integrated databases (**MySQL/MongoDB**) with focus on queries & authentication.
  - Created secure user auth & profile management module.
  - Improved API response time by **25%** using query optimization & caching
  - Technologies Used: **JavaScript (Node.js), Express.js, Redis, JWT, MongoDB**

Projects

- **Low-Latency, Hardware-Efficient SVD Algorithm for Real-Time Applications** *Research Paper 1*
  - Designed an **SVD algorithm** using the **CORDIC** approach to minimize time delay and optimize hardware resource usage for real-time applications
  - **Research paper** published in **IEEE Xplore**
  - Technologies Used: C Programming, VLSI Design
- **Smart AI Health Assistant** *Patent Office Journal*
  - Built **AI-powered** health assistant with live monitoring, symptom analysis, and risk prediction
  - Developed secure backend using NodeJS, **ExpressJS**, MongoDB, **JWT**, and real-time **APIs**
  - Integrated Google Maps API for nearby hospital/doctor recommendations
  - **Patent** published in **Patent Office Journal**
- **FPGA-Accelerated ANN for Efficient Arrhythmia Multi-Classification** *Research Paper 2*
  - Implemented **ANN**-based **ECG** Classification on FPGA for biomedical applications
  - Enhanced accuracy and optimized hardware utilization.
  - **Research paper** published in **IEEE Xplore**
  - Tools: C, VLSI, **PYNQ-Z2**, Vitis HLS, Vivado

Achievements

- **Patent** published in **Patent Office Journal**
- **Contributed** a full chapter on **Functional Verification of ASICs for Performance Optimization in Front-End VLSI Design** in a recently published book **Exploring the Intricacies of Digital and Analog VLSI**, edited by **Koushik Guha**, **Jyoti Kandpal**, and **Swagata Devi** (**IGI Global**, **2025**).
- Solved **900+** questions on all platform and **400+ on Leetcode**
- **2 Research paper** published in **IEEE Xplore**
- Qualified **JEE** Mains **2022**S