**NAMAN KOTHARI**

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**Skills**

* **Web** **Development**: React.js, JavaScript, HTML, CSS, Responsive Web Design, Java, Spring Boot, RESTful APIs, Node.js, Express.js, Microservices Architecture, API Integration, Maven, Git, Postman, Docker, Postman API Testing
* **Databases**: PostgreSQL, MySQL, MongoDB, H2, NoSQL
* **Programming Languages**: Java, Python, C++, JavaScript
* **Cloud & Scalable Systems**: Basic AWS (EC2, S3), Scalable Web Architecture, Containerization Concepts

**Work Experience**

**Parascalr** |*Machine learning and AI development intern* **Jan’25–Present**

* Programmed a system verification program to validate the design of a given gds layout using given set of lydrc rules.
* Constructed a pipeline to integrate LLM and implemented RAG architecture for modification of a given layout.
* Explored multiple LLM models and engineered prompts and prompting strategies to extract desired outputs.

**NIT Kurukshetra** |*Machine Learning Intern* **May’24–Aug’24**

* Conducted analysis on 300+ LLM-generated responses, improving Python error correction accuracy.
* Designed data pipelines using Pandas and NumPy, reducing data processing overhead by 25%.
* Gained expertise in large-scale data management and model evaluation for decision-making.

**Kairos Integrated Solutions |** *Backend web development intern* **May’23-July’23**

* Collaborated with team members to design and develop the backend of **employee management system**.
* Applied concepts of **Dynamic system designing** and **full stack development** to develop a 3-paged website.
* Designed a robust backend systems using **Node.js** and **REST API** endpoints, enhancing efficiency and reliability.
* Established integration **PostgreSQL** for efficient database management, for seamless data handling and scalability.

**Projects**

**Scalable Air Traffic Control System |** *C-Programming, Operating Systems*

* Designed a real-time ATC simulation integrating flight data, capable of handling multiple airports and concurrent plane.
* Implemented synchronized inter-process communication (IPC) models for managing concurrent air traffic.

**Food: Recipe management Website** |*MERN Stack*

* Engineered a highly scalable web platform for managing personalized recipes with MongoDB and Express.js.
* Optimized API response times, reducing query latency by 40%. Added LLM responses to enhance user experience.

**Room Booking System** | *Spring Boot, Maven, Postman API, Java Development*

* Built a secure and scalable booking system with real-time availability tracking.
* Leveraged **Spring Boot** & **H2 database**, reducing query execution times by 50%.

**Player Performance Database** | *MySQL, SQL*

* Prepared a relational database system in **MySQL** to track IPL player statistics for over 225 players.
* Ensured **data normalization** and maintaining **referential integrity** by relational decomposition and primary key.
* Generated complex **SQL queries** to analyze and compare player performance metrics, enabling in-depth reporting for 10 different comparisons.

**AI path finding for Vacuum cleaner |** *Python, Graph Theory, ML Algorithms*

* Developed a user-friendly application to visualize and display movement of user fed house layout.
* Designed and implemented an **AI-driven solution** to for optimal path-finding algorithm across entire home layouts.
* Enhanced operational efficiency by minimizing redundant movements and ensuring comprehensive area coverage.

**Extracurricular Activities**

**Sports**: Represented college team in 4 competitions including IIT Kanpur Sports meet, and Inter-BITS sports competitions.

**Position of responsibility**: Accomplished Editorial Head of the college E-CELL with a record of driving content excellence.

**Freelance content writer:** Worked with multiple tech clients and provided more than 150 writeups including blogs, articles.

**Education**

**Birla Institute of Technology and Science, Pilani (BITS- Pilani), Hyderabad Campus**  **2021 - 2025**

Electronics and Communication engineering | **CGPA**: 7.96

**Dinanath Jr college, Nagpur** **2018 - 2020**

*MSBSHE (Class XII), Aggregate: 90.92*

**Bhavan’s Srikrishna Nagar 2017 – 2018**

*CBSE (Class X), Aggregate: 91.8*