Tanmay Singh

📍 Varanasi UP   🌐 MyPortfolio ↗

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Education

SHUATS (Allahabad Agriculture Institute)	06/2020 - 05/2024
B.Tech Computer Science and Engineering) (**GPA: 7.93 / 10** *)*	*Prayagraj, UP*
St John's School (ICSE and ISC)	April 2016 – Sep 2019
High School and Intermediate (10+2) (**Percentage: 81%, 74.2** *)*	*Varanasi, UP*

Experience

Simplify3x Software Private Limited   Sept 2024 - Present
Associate Software Engineer   📍 *Bangalore, India*
- Project Title: **AI TDM (Artificial intelligence Test Data Management)**
- Currently working as AI-Backend Developer on TDM(Test Data Management) Project. A scalable chatbot interfacing with a database, leveraging **vector embeddings** to handle 5000+ tables and implement **RAG** pipeline using **OpenAI LLM** models to generate SQL/NoSQL query based on user prompt and used **Flask framework** for backend APIs.
- Utilized **prompt engineering** for optimization and enhanced data handling. Integrated **Natutral Language Processing (NLP)** to improve chatbot functionality.
- Employed various Python libraries such as **LangChain** and **spaCy** for tasks like **Named Entity Recognition (NER)** in natural language processing tasks to enhance the functionality and performance of the chatbot.
- Used **Redis** server for saving context in cache memory for stateless API calls.

IIT BHU   05/2022 - 08/2022
Research Intern   📍 *Varanasi, India*
- Project Title: **CU-BEMS, smart building energy**
- Tech Stacks: **Python, Machine Learning , Deep Learning, LSTM, Keras , TensorFlow**
- Developed a **time-series** forecasting solution for a 7-story building, using second-by-second data from IoT devices monitoring electricity, temperature, humidity, and other environmental factors. Preprocessed data with **Min-Max scaling**, then applied a Sequential **LSTM model with ReLU** activation and integrated **ARIMA** to capture seasonal trends. Leveraged advanced time-series analysis techniques for precise forecasting and applied **K-fold cross-validation** to ensure model reliability. This approach enables accurate predictions for efficient building management and environmental insights.

PERSONAL PROJECTS

Read Renting⬡ | *SpringBoot, React.js, MySQL.*
- Built an interactive e-commerce website using React for a dynamic frontend and Spring Boot for efficient backend operations.
- Integrated Okta for secure login and Spring Security for access control, ensuring a secure user experience.
- Leveraged Spring JPA with MySQL to store and manage user data and book inventory, enabling fast data retrieval and scalability.
- Enabled CRUD operations on book listings and user profiles, allowing seamless updates and data consistency across the platform.

Technical Skills

Languages: Java, Python, C++.
Technologies: SpringBoot, Jasper, SpringCloud, JSP, MongoDB, React.js, SQL, SpringAI.
Tools: Git, GitHub, VS Code, Postman.
Soft Skills: Communication, logical thinking, Problem solving,Teamwork, Time Management.

Achievements

HackerRank **5 Strar** Coder.
Our project came **First** in Project Exhibition College event **Xpressions** in May 2023.
Secured **AIR 2883** in **GFG**(World Leaderboard) in 2023.
Secured **1st position** in 10th Board Examination among 150+ students in my School 2017.