SHRIYANSHU SHRIVASTAVA

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Education

IIIT Gwalior   **August 2020 – May 2025**
Integrated B.Tech + M.Tech   *Gwalior,*

Relevant Coursework

- Data Structures
- Computer Networks
- Operating System
- Big Data Analytics
- Artificial Intelligence
- Cloud Computing
- Internet of Things
- Database Management

Experience

ABV-Indian Institute of Information Technology and Management   **May 2023 – August 2023**
Undergraduate Student Researcher | Python, Deep Reinforcement Learning   *Gwalior, Madhya Pradesh*

- Engineered a system for harvesting energy from incoming radio signals to RIS mounted on UAVs using Deep Reinforcement Learning.
- Boosted energy harvesting efficiency from 55% to 65%, nearing the maximum achievable efficiency of 70%.
- Developed a reinforcement learning environment where the UAV-RIS system functioned as a relay between the access point and users.
- Implemented the PPO DRL algorithm to enhance the reward mechanism for energy harvesting.

Projects

Touropedia | *ReactJS, NodeJS, Express, Redux Toolkit*   **February 2024 - March 2024**

- Full stack MERN project: Utilizes ReactJS, NodeJS, ExpressJS, and MongoDB, with Redux-based Toolkit for enhanced functionality.
- Complete web app: Includes features like email and Google authentication, along with CRUD operations, discussion and comments area.
- Auths: Added JWT authentication and Google Authentication functionality.
- Additional functionalities: Search functionality, pagination, and a fully responsive website are embedded for an improved user experience.

Text to Video Generator using Generative AI | *Python, Generative AI*   **January 2024 - March 2024**

- Developed a Text-to-Video generator that takes a single text-video pair as input, providing a variety of editing options and improving editing speed by 20%.
- Handled intricate editing queries by breaking them down into multiple sequential tasks and executing them step by step, leading to a 15% increase in processing efficiency.
- Directed the integration of DDPM Inversion, enhancing the AI model, cutting manual editing time by 50 hours per month, and increasing productivity and output quality by 20%.

BasicBlog - Blog app | *MERN*   **May 2023 - August 2023**

- Built a full stack blog platform using the MERN stack (MongoDB, Express.js, React.js, Node.js).
- Implemented user and admin dashboards, a theme toggle feature, and search functionality, improving user engagement by 20%.
- Integrated secure authentication through Email and Google sign-in.
- Utilized Redux for state management, enhancing application performance by 15%.

Technical Skills

Languages: Python, C/C++, HTML,CSS, JavaScript, SQL
Developer Tools: VS Code, PowerBI, Android Studio, MS Word, MS Excel
Technologies/Frameworks: PyTorch, MySQL, ReactJS, Tailwind, GitHub, Machine Learning

Achievements

- Completed 300+ DSA problems on platforms like LeetCode, GeeksforGeeks, and Codeforces, enhancing my proficiency in algorithms and data structures.
- February Long Challenge II, Global rank - 157 Division 3 (Codechef).
- Submitted research paper on Integration of UAV and RIS using DRL in Phycomm Journal.
- GATE qualified in 2023 with a decent rank of 4547.