Saumil Bansal

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Education

Bennett University — Greater Noida, UP
Bachelor of Technology in Computer Science — *Sep. 2022 – Sep 2026*

St.Peter's College — Agra, UP
Science with Maths — *April. 2010 – March 2022*

Experience

Summer Research Intern — May 2024 – June 2024
IIT Mandi — *Mandi, HP*

- Created a graph plotting training loss against epochs using Python's Matplotlib to assess model performance and identify learning trends.
- Developed a web app enabling video upload, frame extraction, and display using React.js for the frontend and Django for the backend, with video processing handled by OpenCV.
- Implemented a responsive user interface with React.js and CSS, and established robust backend services in Django to manage video processing and frame extraction efficiently.
- Tackled issues related to large video file handling and frontend-backend communication, with plans to add features like video playback controls, optimize performance, and implement user authentication.

Projects

Blogging app | *Javascript, react.js, html,css,Postman, node.js, express.js*

- Developed a full-stack web application using with Flask serving a REST API with React as the frontend
- I developed a MERN (MongoDB, Express.js, React.js, Node.js) stack blogging application from scratch, showcasing my proficiency in full-stack development.
- Visualized GitHub data to show collaboration
- Leveraging MongoDB for the database, Express.js for the backend, React.js for the frontend, and Node.js for server-side logic, I created a robust platform for creating, editing, and publishing blog posts.

Conformal prediction on plant village dataset | *Python*

- Conducted research on applying conformal prediction techniques to the Plant Village dataset, covering 15 distinct classes of plant diseases.
- Utilized a comprehensive Python-based toolkit for model development, employing TensorFlow and scikit-learn for model evaluation.
- Leveraged pandas for data manipulation, and matplotlib and seaborn for visualization, while relying on NumPy for numerical computations.
- Explored the intersection of machine learning and agricultural science, aiming to enhance the accuracy and reliability of plant disease classification models through meticulous experimentation and analysis.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib