

Suraj Kumar

📞 +91 9973867023 ✉ surajkumar_211ee154@nitk.edu.in 🔗 LinkedIn 🐙 GitHub 🏆 Kaggle

Education

National Institute of Technology Karnataka (NITK) – Bachelor in Electrical Engineering Dec 2021 – May 2025

- **Coursework:** Machine Learning, Python, Artificial Neural Networks

Projects

StudyBud - A Random Chatroom Application

Nov 2024

– Python, Django, Django Channels, Redis, HTML/CSS/JavaScript

🔗 Explore the Project

- Built a Django-based web app enabling users to join random chatrooms and engage in real-time conversations without registration.
- Leveraged ****Django Channels**** for WebSocket support and ****Redis**** as the channel layer for efficient message handling.
- Designed an intuitive frontend using HTML, CSS, and JavaScript for seamless user interaction.
- Created Python scripts for backend management and integrated WebSocket consumers for real-time updates.
- Planned future features like user authentication, chat history storage, user profiles, and push notifications.

Mock OCR Model - CPU vs GPU Performance

Dec 2024

– Python, PyTorch, Matplotlib, psutil, Tesseract

🔗 Explore the Project

- Built a CNN-based OCR model for performance evaluation on CPU and GPU.
- Compared FPS and latency metrics; tracked memory usage with psutil.
- Integrated Tesseract for OCR functionality and visualized results with Matplotlib.
- Automated performance analysis and visualization through Python scripts.

QA.DOCS - AI Document Q&A Application

Jan 2025

– Python, Django, Hugging Face, Azure, PostgreSQL, OpenAI API

🔗 Explore the Project

- Developed a web app for AI-driven Q&A on uploaded documents (PDF, Word, Excel).
- Integrated GPT (OpenAI API) and Hugging Face for context-aware answers.
- Built user-friendly UI and an admin panel for document and user management.
- Deployed on Azure with PostgreSQL database; automated CI/CD with GitHub Actions.

Skills

Programming Languages: Python, C, C++, SQL, JavaScript, HTML, CSS

Frameworks and Tools: Django, Node.js, React.js, TypeScript, Git/GitHub, VS Code, Jupyter Notebook

Machine Learning: TensorFlow, Keras, scikit-learn, Hugging Face, spaCy, Rasa, RAG, NLTK

Data Science: Pandas, NumPy, Matplotlib, Seaborn

Key Concepts: Deep Learning, Natural Language Processing (NLP), Time Series Analysis, Data Structures, Algorithms, Artificial Intelligence

Cloud Platforms: Google Cloud, Microsoft Azure

Achievements

- JEE Main (Rank 9k) and JEE Advanced (Rank 13k); strong problem-solving and analytical skills.
- Qualified NTSE (2019), demonstrating excellence in cognitive and academic abilities.
- Solved 400+ DSA problems across various platforms, showcasing expertise in data structures and algorithms.