

Vaibhav Singh

Associate Data Scientist/Developer

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SUMMARY

Results-driven Data Science Intern with hands-on experience in building AI-driven chatbots, scalable APIs, and end-to-end machine learning pipelines. Skilled in Python, PyTorch, FastAPI, and modern NLP/speech technologies such as BERT, NVIDIA NeMo, and Pyannote. Proficient in developing real-time applications with a strong foundation in data manipulation, machine learning, and web development. Adept at integrating LLMs and prompt engineering to solve real-world problems. Demonstrated excellence through impactful internships, and hackathons with a proven ability to communicate technical solutions clearly and effectively.

WORK EXPERIENCE

Data Science Intern, OriServe, Noida, India

Jul 2024 - Present

(Python, PyTorch, FastAPI, LLMs, Prompting, etc)

- Collaborated on AI-driven chatbot development and automation solutions, leveraging models like BERT, Pyannote, NVIDIA NeMo, etc and frameworks like Pytorch, Plotly, etc to enhance user engagement and operational efficiency.
- Designed and deployed scalable FastAPI services to integrate AI and streaming functionalities, ensuring optimized system performance and seamless user experiences
- Designed robust pipelines for TTS and STT datasets, enabling efficient preprocessing, training, and evaluation with advanced speech techniques.
- Applied prompt engineering to refine outputs across diverse use-cases, gaining hands-on experience on LLMs response optimization.
- Authored an article on Medium: [***Building High-Fidelity Datasets for Superior Text-to-Speech Fine-Tuning***](#), offering insights on best practices, challenges, and strategies for ensuring superior audio output quality.

Web development Intern, The Sparks Foundation

- Developed a dynamic banking website with real-time transactions and user-friendly UI to simulate financial operations.

Participant, HACKATHONS & CLOUD (BITBOX, Google Cloud Study Jams)

- Participated in BITBOX by GDSC IIIT 128, a 12-hour hackathon fostering team collaboration and stress management in a pro environment.
- Earned badges in Generative AI Arcade Game, Google Cloud Computing Foundations, and more via Google Cloud Study Jams.

EDUCATION

JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, Noida, India - B.Tech, Computer Science & Engineering - GPA: 7.3

Sep 2021 - Jun 2025

PROJECTS

CRYPTONIX

- Built a cryptic toolkit with cipher solvers, encryption-decryption, steganography, and password strength checker.
- Applied DSA concepts like maps, vectors, recursion, hashing, and collision handling.

PYTONE – REAL-TIME SPEECH EMOTION RECOGNITION

- Developed emotion recognition system using real-time speech and text analysis via ML models to enhance interaction quality.

BCI Games–Brain – ControlledInterfaceGame

- Engineered brain-computer interface using EEG signals, enabling real-time in-game actions triggered by smile detection; participants achieved 95% accuracy in executing commands, reducing cognitive load during gameplay and were impressed with novel interface.

AID FOR SPEECH AND HEARING IMPAIRED

- Developed real-time ISL translator using speech-to-text and SIGML-based animations for inclusive communication support.

SKILLS

Programming Languages : Python, C++, SQL, C, Html, CSS, Javascript
Data Manipulation : Pandas
Web Development : FastAPI, Flask, Django, Websockets
Machine Learning : torch, lightning, tensorflow
Other Tools : Shell, PowerBI