SAKET SONTAKKE

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SUMMARY

Undergraduate student with a strong academic background and a keen interest in multidisciplinary projects. Proficient in Python and C++, passionate about Machine Learning, and experienced in web development, enabling effective contributions to both AI-ML and full-stack projects.

EDUCATION

Dr. Vishwanath Karad MIT World Peace University   Aug 2022 - Present
Bachelor of Technology in Computer Science and Engineering   Current CGPA: **8.50**

○ Participated in multiple hackathons, sustainability challenges, and coding competitions, demonstrating problem-solving abilities. Additionally, served as a Student Track Coordinator and Liaison Officer for the college hackathon, facilitating smooth event execution of about 28 teams and 160+ participants.

EXPERIENCE

Indian Institute of Technology, Bombay   June 2025 - Dec 2025
Intern at Centre for Educational Technology   Mumbai, India

○ Developed a web-based qualitative data analysis tool integrating automated transcription and quantitative statistical testing. Work was published and presented at conferences, including ICCE 2025 and T4E 2025 hosted by IIT Madras.

SKILLS

- **Programming Languages:** C, C++, Python, SQL
- **Web Development:** MongoDB, Express.js, React.js, Node.js, HTML, CSS, REST APIs, JWT, Jest, Docker, Flask, AWS
- **Machine & Deep Learning:** NumPy, SciPy, PyTorch, TensorFlow, Scikit-learn, Pandas, RAPIDS (cuDF, cuML), cuDNN
- **Soft Skills:** Adaptive, Collaborative, Excellent Communicator, Proactive

PROJECTS

- **Qualitative Data Analysis Application** | quail.edarts.online | GitHub
  - Designed and deployed a MERN stack Single-Page Application (SPA) for qualitative data analysis, integrating a Python/Flask microservice to perform statistical tests (Chi-Square, Fisher's Exact Test) using SciPy.
  - Architected a "Bring Your Own Key" (BYOK) model featuring Optimistic UI to reduce perceived UI latency and atomic MongoDB operations to ensure data integrity and high-performance system.

- **Protein Secondary Structure Prediction & Web Application** | Website | GitHub
  - Built a custom Python ETL pipeline that extracts raw protein data, parses complex secondary structures, and standardizes features into a CSV format, creating a dataset of ∼125,000 unique protein sequences.
  - Trained a hybrid deep learning model (CNN+BiLSTM+BiGRU) achieving 88.99% accuracy in secondary structure prediction.

- **Signal vs. Background Classification in Higgs Boson Detection** | GitHub
  - Engineered and optimized deep neural networks for signal-background classification in Higgs boson detection on the HEPMASS dataset (10M+ events), leveraging RAPIDS (cuDF, cuML) for accelerated processing and GPU parallelization.
  - Achieved an impressive ROC AUC of 0.95 and accuracy of 86.41%, demonstrating highly effective signal-background discrimination in high-energy particle physics.

CERTIFICATIONS

- **Introduction to Machine Learning** (NPTEL24CS101S652004034) by IIT Madras
- **Cloud Computing** (NPTEL24CS118S952002286) by IIT Kharagpur
- **Crash Course on Python** (8KHPUKYCWAGA) by Google
- **Using Python to Interact with Operating Systems** (L9VWFFLED4C3) by Google