



Kartikya Gupta

Roll No.:2020A7PS0206U

B.E.(Hons.) Computer Science Engineering

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EDUCATION

Degree	Institute	CGPA/Percentage	Year
B.E. (Hons.)	BITS Pilani	7.20/10.00	2020-2024
Senior Secondary	The Khaitan School (CBSE)	85.2%	2020
Secondary	The Khaitan School (CBSE)	91.4%	2018

KEY COURSES TAKEN

- **Core:** Computer Networks, Computer Organization & Architecture, Design & Analysis of Algorithms, DSA, Object-Oriented Programming, Operating Systems
- **Mathematics:** Calculus, Discrete Math, Linear Algebra, Number Theory, Operation Research, Probability & Statistics, PDE
- **Electives:** Cryptography, Data Mining, Foundation of Data Science, Machine Learning, Natural Language Processing, Neural Networks & Fuzzy Logic

PROFESSIONAL EXPERIENCE

- **Valiance Solutions** Jan 2024 - Present
Intern Data Scientist Noida, India
 - Secured a callback for collaboration based on the excellent performance during sophomore summer internship.
 - Adapted quickly to the workplace, finished the proof of concept within the first week of joining.
 - Extracted 8-10 facial and ocular features to develop an accurate model for neonatal jaundice detection.
 - Implemented advanced CV techniques to obtain test accuracy of 89%, currently scaling the project on GCP.
- **BITS Pilani** Sept 2022 - Dec 2023
Undergraduate Researcher Dubai, UAE
 - Conducted extensive research in Deep Learning, Digital Image Processing, Computer Vision, HCI and GANs.
 - Completed 4 enterprise level projects in teams of professors and peers at the Intelligent Computing Lab.
 - Currently seeking opportunities to disseminate findings within the research community as we are in final stages of publishing our research.

SELECT PROJECTS

- **Sign Language Generation (Paper underway)** Aug. 2023 - Dec. 2023
Dr. Ellakiya R.
 - Lead the project focused on generating real-time 3D pose ASL using an advancing multi-modal system.
 - Integrated 96.7% accurate speech emotion recognition (SER) model for 8 emotions through the utilization of audio data.
 - Synthesize 2000 sign language gestures from spoken language, contributing to improved accessibility and communication for the hearing-impaired while optimizing the system with frugal innovations.
- **Fundus Image Processing using ViT (Paper underway)** Aug. 2023 - Dec. 2023
Dr. M. B. Srinivas
 - Analyzed and leveraged 4500 high-resolution retinal images, capturing various disease stages, to identify key biomarkers for early detection, resulting in a 15% increase in accuracy of diagnosis.
 - Enhanced medical imaging software to identify subtle features imperceptible to the human eye, resulting in a groundbreaking 99.2% disease detection rate across all stages, significantly improving patient outcomes.
 - Rooted in a solid theoretical understanding of ophthalmology, our research establishes 5 key features in impactful investigations and introduces novel approaches to prevent permanent blindness.
- **Sign Language Generation** Jan. 2023 - Jun. 2023
Dr. M. B. Srinivas
 - Developed advanced image generation models implemented using TensorFlow and Computer Vision frameworks for replicating 4K pixel resolution images.
 - Expanded the given dataset from 40 to thousands of images while maintaining a high image similarity (95%).
 - Achieved remarkable results due to architecture's ability to defer mode collapse with stabilized model training to gain faster convergence.

TECHNICAL SKILLS

- **Languages:** Proficient: Python, SQL, L^AT_EX, Competent: C++, MATLAB, Foundational: JAVA, C
- **Technologies/Frameworks:** TensorFlow, OpenCV, Streamlit, Numpy, Pandas, Kubernetes
- **Developer Tools:** Jupyter Lab, Git, Docker, Github, Sphinx, TensorFlow Profiler, pytest, GCP, Linux