Jaiminkumar Ashokbhai Bhoi

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Education

MS Computer Science, specialized in Computer Vision *University of Central Florida* **Florida, USA** *2023-2025*
Relevant Courses: Computer Vision, Machine Learning, Computer Vision Systems, Medical Image Analysis, Current Topics in Machine Learning

Skills & Interests

- **Skills:** Python, Computer Vision, Tensorflow, Karas, Pytorch, OpenCV, Javascript, HTML, CSS, Java, C++, Flutter, Android NDK, CMake, Cuda, Docker, Jupyter notebooks, Git, Data Structures, Algorithms, Containerization, Linux/Unix, MySQL, Kubernetes, Azure, AzureML, Custom Vision, Azure functions, Azure Storage, Azure Kubernetes Cluster
- **Interests:** Applied Research, AI/ML Systems, Computer Vision, Self Supervised Learning, Software Engineering, Platform Engineering, Efficient model training, Electroencephalography(EEG) and Visually Evoked Potentials

Professional Experience

Individual Contributor, *(University of Central Florida)* **Florida, USA** *12/2023 - present*
- Self-engineered dicom annotation extraction using pydicom for angle measurement, reducing manual efforts by 100% for medical students and medical experts. Used Segment Anything model to automatically extract femur and tibia bone segments. Further classified masks for proper classification using lightweight classifiers.

Systems Engineer *(Tata Consultancy Services - TCS)* **Bangalore, India** *06/2018 - 06/2023*
- Spearheaded a team of three to create deep learning models achieving over 90% accuracy on real-time production data. Reduced manual workflows by 90% through seamless integration of these models along with continuous feedback for improving models further.
- Designed, developed, and seamlessly ported multiple deep learning models to edge devices. Achieved a remarkable 95% reduction in GPU usage for inference.
- Successfully deployed deep learning models to Azure Cloud. Provided model inference as a service across various platforms, including edge devices.
- Developed REST APIs for deep learning models using AzureML, Docker, Flask/RestX, and Azure Kubernetes. These APIs efficiently handle 10,000+ requests per hour with auto-scaling capabilities which resulted in optimized cloud resource usage, reducing cloud service costs by 60%.

Research Associate *(Tata Consultancy Services - TCS)* **Bangalore, India** *04/2020 - 06/2023*
- Designed and implemented an innovative optical flow-based crowd anomaly detection solution capable of identifying sudden changes in direction, speed, and digital fence-based anomalies.
- An Efficient Ensemble-Based Deep Learning Model for the Diagnosis of Cervical Cancer: Achieved over 97% accuracy (ISCAI)
- Aerial Video Analytics based dynamic Non-linear distance measurement between on-ground objects (Indian Patent: Filed)
- Method and system to detect a text from multimedia content captured at a scene (Indian Patent: Filed)

Projects & Research

- EEG Vis (Understanding Visually Evoked Potentials of EEG signals) (Jan 2024 - Present) - Github
- Self-Supervised Distillation with No Labels on X-ray Images, [95.5% accuracy] (DinoXRay) - Github
- Human Activity Recognition on Static Images (HAR) (Aug. 2023 - Dec 2023) - Github
- Self Checkout Theft Prevention (RetailEye) (Aug. 2023 - Dec 2023) - Github
- Container Image Analytics (Feb. 2021 - June. 2023)
- Computer Vision on Qualcomm RB500 Development Board (Jun. 2020 - Feb. 2021)