

Ronak Chhatbar

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PROFESSIONAL SUMMARY

Skilled Computer Vision Engineer with a robust background in machine learning and AI. Expert in enhancing model performance and efficiency, with a deep understanding of Nvidia-TensorRT, Deepstream, and cloud solutions. Adept in C++ and Python, with a history of collaborative success and innovative problem-solving in AI applications.

EDUCATION

- **University at Buffalo, The State University of New York** Buffalo, NY
Masters in Computer Science; GPA: 3.4/4.0 Aug 2022 - Jan 2024
- **Jawaharlal Nehru Technological University Hyderabad** Hyderabad, India
Bachelor of Computer Science; GPA: 3.6/4.0 Aug 2015 - May 2019

EXPERIENCE

- **Tensorgo Technologies** Hyderabad, India
Computer Vision Engineer Sep 2020 - Aug 2022
 - **Optimized deep learning models for Nvidia-TensorRT and Deepstream**, achieving a 40% improvement in processing efficiency and a 25% increase in system throughput.
 - Designed and deployed a **remote photoplethysmography system using computer vision**, reducing prediction errors by 15% and enhancing heart rate estimation accuracy.
 - Architected and implemented pipelines for **continuous integration and deployment** of deep learning applications using Kubeflow, leading to a 60% reduction in manual intervention.
 - Developed and deployed deep learning models on **Jetson-Nx and Nano platforms**, enhancing real-time data processing capabilities for field applications.
- **Wavelabs.ai** Hyderabad, India
Machine Learning Engineer Sep 2019 - Aug 2020
 - Identified weapons using object detectors and deployed systems on **Jetson-Nano NX**; achieved live stream airing to mobile apps within two seconds of threat detection.
 - Analyzed customer conversations in real-time for **sentiment analysis**, implementing a rating system to improve customer service and representative performance.
 - Designed and implemented **dynamic pricing simulations and forecasts** for BFS Remittance Domain, contributing to a 15% increase in revenue through optimized decision-making.
 - Built containerized training and serving scripts using **Docker** for deployment on AWS Sage Maker, resulting in enhanced operational efficiency and reduced resource usage.
- **Wavelabs.ai** Hyderabad, India
Computer Vision Research Intern Nov 2018 - April 2019
 - Developed an in-house **facial detection system**, accurately identifying organization members along with their age and gender, enhancing security and personalization features.
 - Conducted a comprehensive study on **image classification** accuracy, using various base architectures and learning rates with TensorFlow, improving model accuracy by 20%.

ACADEMIC EXPERIENCE

- **Spatial AI & Robotics Lab** Buffalo, NY
Graduate Research Assistant Dr.Chen Wang — May 2023 - Present
 - Developed C++ plugins for **optimizing visual odometry and monocular depth estimation models**, successfully integrating with TensorRT backend. This optimization significantly improved model performance and compatibility with advanced AI systems.
 - Achieved a 33% increase in **inference efficiency** by enhancing optical flow estimation, utilizing specialized plugins. This improvement marked a substantial advancement in the accuracy and speed of real-time data processing.
 - Spearheaded the backend development of robotranking.com, a comprehensive platform for robotics research assessment. This initiative demonstrated leadership in project management and technical innovation, contributing a valuable resource to the robotics community.

SKILLS SUMMARY

- **Computer Vision & Machine Learning:** Deep Learning, Machine Learning, Object Detection, Predictive Modeling, Reinforcement Learning
- **AI Technologies & Frameworks:** TensorRT, Keras, PyTorch, MLflow, OpenCV, CUDA, Open Neural Network Exchange (ONNX)
- **Programming & Scripting:** Python, Java, Rust, SQL, Scala
- **Cloud & DevOps:** Amazon Web Services (AWS), Docker, Kubernetes, Kubeflow, Microsoft Azure, Continuous Integration (CI)
- **Data Management & Analytics:** Data Pipelines, Data Modeling, Data Integration, Big Data Technologies (Apache Spark, Apache Kafka), PostgreSQL, Tableau
- **Software Development & System Design:** Agile Software Development, Microservices, REST APIs, Backend Web Development, Flask, Django, System Analysis
- **Collaboration & Communication:** Cross-Functional Teamwork, Problem Solving, Project Management, Process Improvement