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*

- Enhanced deep learning models (eye-gaze, emotion) performance by **40% through Nvidia-TensorRT and Deepstream optimization**, increasing system throughput by **25%**.
- Developed a computer vision-based heart rate estimation system, improving prediction accuracy by **15%** using a dataset of over **20,000+** images.
- Automated pipeline processes for deep learning applications, reducing manual intervention by **60%** and increasing deployment efficiency by **30%.**
- Deployed AI models on **Jetson-NX and Nano**, improving real-time processing capabilities by **20%** in field applications.

Wavelabs Technologies — Hyderabad, India
Machine Learning Engineer — *May 2019 - Aug 2020*

- Implemented a weapon detection system on Jetson-Nano NX, reducing **threat identification time to under two seconds**, integrated with mobile apps (iOS/Android).
- Conducted real-time sentiment analysis on **5,000+ customer interactions per month**, resulting in a **25%** improvement in customer service quality.
- Developed dynamic pricing models for BFS Remittance, impacting **10,000+** transactions and contributing to a **15%** increase in revenue through optimized pricing.
- Utilized **Docker** for AI model training and deployment on AWS Sage Maker, reducing resource utilization by **35%** and deployment time by **20%.**

Wavelabs Technologies — Hyderabad, India
Computer Vision Research Intern — *Nov 2018 - April 2019*

- Created a facial detection system with **95% accuracy** for employee identification, incorporating age and gender analysis.
- Led an image classification project, **improving model accuracy by 20%** through testing with various architectures and learning parameters in TensorFlow.

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