

Ronak Chhatbar

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PROFESSIONAL SUMMARY

Dynamic Software Engineer with expertise in machine learning system design and GPU optimization. Excels in building robust ML architectures and large-scale distributed systems using C/C++ and Python. Proficient in GPU cluster management and performance tuning, with a strong grasp of Kubernetes and containerization. Agile and effective in high-tech environments, offering a blend of front-end and back-end development skills to drive innovation and enhance user experiences

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 computer vision applications, increasing performance by **40%** using Nvidia-TensorRT and Nvidia Deepstream. This led to a **25% increase** in system throughput.
 - **Spearheaded a high-performance computer vision project**, enhancing heart rate prediction accuracy by **15%** with a robust dataset.
 - **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.
 - GPU Architecture & Cluster Management: Demonstrated experience with GPU-based model optimization and deployment.
- **Wavelabs.ai** Hyderabad, India
Machine Learning Engineer Sep 2019 - Aug 2020
 - **Designed and implemented a real-time weapon detection system** on Jetson-Nano NX platforms.
 - **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.
 - Utilized Docker for AI model training and deployment on AWS Sage Maker, reducing resource utilization by **35%** and deployment time by 20%.
 - Large-Scale Machine Learning Systems: Proficiency in building and optimizing systems integrating with GPU, RDMA, and storage.
 - Knowledgeable in cloud technologies (AWS, Azure) and DevOps tools (Docker, Kubernetes).
- **Wavelabs.ai** 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