Ronak Haresh Chhatbar

716-507-2419 | @ronakchhatbar@gmail.com | ronak-haresh-chhatbar | github.com/alphapibeta | alphapibeta.github.io

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*
  Courses: Operating Systems, Analysis Of Algorithms, Biometrics Image Analysis, Reinforcement Learning, Computer Vision.
- **Jawaharlal Nehru Technological University Hyderabad** — Hyderabad, India
  Bachelor of Computer Science; GPA: 3.6/4.0 — *Aug 2015 - May 2019*
  Courses: Machine Learning, Cloud Computing, DSA, Computer Networks, Probability, Statistics, Mathematics, Compiler Design.

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

Experience

- **Tensorgo Technologies** — Hyderabad, India
  Computer Vision Engineer — *Sept 2020 – Aug 2022*
  - Led the development of an innovative emYt+, integrating ASR technology to accurately segment and identify speakers, enhancing real-time decision metrics which resulted in a 16% increase in meeting analytics accuracy and client decision-making
  - Strategically integrated eye-gaze and emotion deep learning models with Nvidia-TensorRT and Deepstream, aligning with tensorrt backend optimizations, resulting in a 40% inference boost and 25% greater system throughput for emYt+ software
  - Refined a heart rate estimation system to address demographic diversity, utilizing BP4D+, UBFC-1, and UBFC-2 datasets, which resulted in an 8% enhancement in accuracy for a more inclusive and reliable application
  - Enhanced Agile sprints by automating model training with a multi-container Docker setup, enabling consistent, end-of-sprint deliverables that accelerated integration and performance evaluation for diverse ML, CV and ASR applications

- **Wavelabs Technologies** — Hyderabad, India
  Machine Learning Engineer — *May 2019 - Aug 2020*
  - Developed an AI-based weapon detection system for doorbell cameras using Jetson Nano, enabling on-device processing and instant threat notification to user mobile apps, achieving under 2-second identification with 30-40 FPS model performance
  - In a dynamic Agile Scrum environment, managed bi-weekly sprints for a weapon detection system project, leading data collection, augmentation, and model training processes, which culminated in regular sprint-end enhancements to the AI's threat detection performance
  - Implemented a real-time sentiment analysis system using ULMfit language modeling and Flask, analyzing over 5,000 customer interactions monthly and enhancing customer service quality by 6% with accurate satisfaction scoring
  - Streamlined AI model training for weapon detection with Docker and AWS Sage Maker, enhancing resource efficiency by 35% and deployment speed by 20%, in sync with Agile sprint cadence for consistent sprint-end outcomes

- **Wavelabs Technologies** — Hyderabad, India
  Computer Vision Research Intern — *Nov 2018 - Apr 2019*
  - Advanced image classification accuracy by 20% through extensive experimentation with diverse architectures, optimizers, and custom neural-nets in TensorFlow, underpinned by a dataset of 3000+ manually labeled images
  - Designed and implemented a facial recognition system with 95% accuracy, utilizing ResNet50 and HOG for feature extraction, and deployed age and gender classification models for real-time analytics on an i5 processor, achieving 8-10 FPS

Academic Experience

- **Spatial AI & Robotics Lab** — Buffalo, NY
  Graduate Research Assistant — *Dr.Chen Wang — May 2023 - Present*
  - Achieved dual enhancements in AI vision systems by converting visual odometry models to ONNX and refining optical flow estimation, leveraging C++ plugins and mixed precision for a 33% efficiency gain and seamless TensorRT integration on Nvidia platforms
  - Led backend development for robotranking.com, a platform for robotics research assessment, showcasing leadership in project management and technical innovation within the robotics community.