BUTCHI VENKATESH ADARI

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EDUCATION

Masters in Robotics Engineering - GPA: 3.8/4.0
Worcester Polytechnic Institute, Worcester, Massachusetts
Aug 2023 - May 2025 (Expected)

PG Certification in Artificial Intelligence & Machine Learning
Indian Institute of Technology Guwahati
June 2020 - May 2021

Bachelors in Computer Science and Engineering - GPA: 7.77/10
Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, India
July 2017 - May 2021

PROFESSIONAL EXPERIENCE

Graduate Researcher | ELPIS LAB, Worcester Polytechnic Institute
Jan 2024 - Present

- Pioneered depth estimation algorithm reducing error by 70% through advanced architecture optimization
- Constructed novel Grasp Transformer yielding 85% pick success rate in manipulation tasks
- Implemented real-time testing framework accelerating deployment cycles by 50% *Technologies: PyTorch, Computer Vision, PyBullet, ROS*

Machine Learning Engineer | Tata Consultancy Services, Hyderabad, India
July 2021 - June 2023

- Launched production-grade vision pipeline achieving 95% accuracy with 60% latency reduction
- Orchestrated end-to-end MLOps infrastructure decreasing deployment time by 75% and deployed into VertexAI
- Refined document processing workflow boosting efficiency by 40% via custom OCR models
- Automated telecom data pipelines eliminating 70% of manual processing overhead *Technologies: TensorFlow, PyTorch, GCP, Docker, Kubernetes, MLflow, Python, SQL, Apache Airflow*

PROJECTS

Research Paper Analysis RAG System | *Oct 2024 - Dec 2024*

- Designed scalable RAG architecture processing 1000+ papers with millisecond responses
- Streamlined deployment workflow achieving 99.9% system reliability
- Integrated automated testing reducing bug detection time by 80% *Technologies: LangChain, FAISS, FastAPI, Docker, GCP*

Customer Support Intelligence Chat Bot | *Oct 2024 - Nov 2024*

- Deployed LLM solution elevating customer satisfaction by 85%
- Scaled infrastructure supporting 10,000+ concurrent users
- Introduced A/B testing framework boosting accuracy by 25% *Technologies: Hugging Face, AWS SageMaker, MLflow*

Advanced Image Captioning | *Aug 2024 - Oct 2024*

- Created transformer model achieving 0.75 BLEU score benchmark
- Optimized inference performance cutting latency by 45%
- Developed CI/CD pipeline reducing deployment cycles by 60% *Technologies: PyTorch, AWS, Docker*

Neural Scene Reconstruction | *Mar 2024 - Apr 2024*

- Formulated NeRF architecture delivering 92% reconstruction precision
- Enhanced rendering pipeline yielding 65% faster inference
- Incorporated depth estimation improving spatial accuracy by 40% *Technologies: PyTorch, CUDA, Computer Vision*

Autonomous Vision System | *Feb 2024 - Mar 2024*

- Synthesized multi-model detection framework achieving 98% accuracy
- Executed real-time processing pipeline handling 30 FPS
- Modified collision prediction algorithm reaching 95% reliability *Technologies: YOLO3D, CLRERNet, ZoeDepth*

Edge Computing Navigation | *Jan 2021 - May 2021*

- Devised CNN architecture attaining 94% detection accuracy
- Optimized model deployment achieving 15 FPS on embedded hardware
- Unified sensor data reducing false positives by 75% *Technologies: TensorFlow Lite, OpenCV, Raspberry Pi*

TECHNICAL SKILLS

- **ML/DL Frameworks**: PyTorch, TensorFlow, Hugging Face, scikit-learn

- **Infrastructure**: Docker, Kubernetes, MLflow, DVC, Git
- **Cloud Platforms**: AWS SageMaker, GCP Vertex AI, Azure ML
- **Programming**: Python, C++, Java, SQL
- **Development**: Linux, OpenCV, FastAPI, ROS, Gradio

CERTIFICATIONS

- Neural Networks and Deep Learning (Coursera)
- Deep Learning Specialization (Coursera)
- MLOps with Azure Machine Learning (Microsoft)