Hemanth S Banur

+91 636 353 6350 | arjunbanur27@gmail.com | linkedin.com/in/hemanth-s-banur | github.com/arjuuuuunnnnn

Education

PES University **Nov 2022 – Present**

Bachelor of Technology in Computer Science *Bangalore, Karnataka*

Technical Lead at Appex: Organized 24-hr hackathons and ideathons for 200+ students and provided mentorship and resources.

Relevant Coursework: Data Structures, Machine Learning, Deep Learning, Natural Language Processing, Cloud Computing, Operating Systems, Software Engineering, Database Management Systems, Generative AI

Experience

IEEE CS **Jul 2024 – Aug 2024**

Research Intern *PESU, Bangalore*

- Implemented a hybrid GAN-VAE system for artistic style transfer, achieving 40% improved style preservation compared to baseline models *(source code)*
- Led comprehensive comparative analysis of multiple GAN architectures (Cycle GAN, Attention GAN)

Toyota Kirloskar Motor **Jun 2024 – Jul 2024**

Intern *Bangalore, Karnataka*

- Developed and deployed an automated sentiment analysis system, revolutionizing review processing from 7 hours to 10 seconds, while enabling seamless access for 100+ employees across company LAN infrastructure
- Engineered a real-time data analysis pipeline with 99% efficiency improvement (4 hours to 5 seconds) and maintaining 100% data accuracy

CDSAML **Jun 2024 – Jul 2024**

Research Intern *PESU, Bangalore*

- Developed Kannada-to-English speech translation pipeline surpassing Google's Long Model benchmarks, implementing a comprehensive seven-stage system for real-time processing *(source code)*
- Engineered state-of-the-art audio processing modules incorporating advanced ML techniques (denoising, segmentation, transcription)

Publications

Metamorphosis of Photorealistic Images to Pencil Sketch using a Hybrid GAN-VAE

- 9th International Conference on Information and Communication Technology for Competitive Strategies, 2024

Projects

DevForge *[Link]*

- Engineered an AI-powered development environment integrating LLMs with containerized runtimes, automating code generation, execution, and error-correction to enhance developer productivity and code reliability
- Developed a web-based IDE with seamless project management and interactive console access, orchestrating communication between Linux filesystem, cloud containers, and AI models for a streamlined development workflow.

MLOps - Credit Card Fraud Detection *[Link]*

- Architected and implemented a comprehensive end-to-end MLOps pipeline for credit card fraud detection, encompassing robust data ingestion, preprocessing, model training, and production deployment workflow
- Established a scalable MLOps infrastructure with version control, CI/CD and advanced experiment tracking/model management using DagsHub and MLflow, ensuring reproducibility and maintainability of ML systems

ARchitex *[Link]*

- Developed an AR/VR-enabled home design platform allowing users to visualize and estimate costs for custom home configurations, including placing 3D furniture models and applying paint/material textures for a true-to-life preview
- Leveraged Three.js to build a highly interactive user interface enabling intuitive home layout planning, seamlessly integrating AR/VR features to provide an immersive architectural design experience for contractors and homeowners

Technical Skills

Languages: C/C++, Python, JavaScript, SQL
Libraries: Pandas, Numpy, Scikit-Learn, OpenCV, PyTorch, TensorFlow, Matplotlib, NLTK, Flask
Frameworks/ Tools: Docker, Git, MERN, Linux, Unity, Azure, MLOps, MySQL, Transformers, Diffusers, LLM's, Blender, ThreeJS