Anirudh Kaushik

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Education

International Institute of Information Technology, Hyderabad Jul 2020 – Jul 2025
M.S. in Computer Science (Computer Vision) CGPA: 10/10
B.Tech in Computer Science CGPA: 9.57/10

- All India Rank 21 (UGEE exam); Gold Medal Runner-up (2025 Batch).
- Dean's Merit List for Academic Excellence (6 semesters), Dean's Research Award.
- Relevant Coursework: Deep Learning, Statistical Methods in AI, Machine Learning, Information Retrieval, Computer Vision, Natural Language Processing, Neuroeconomics, Quantum Systems.

Experience

Microsoft, One Branch Release (MOBR) – Software Engineer Jun 2025 – Present

- Engineered resilient distributed release systems powering Microsoft 365 services.
- Designed fallback deployment pathways ensuring traceability and reliability at scale.
- Focus on infrastructure resilience, reproducibility, and low-latency deployment flows.

Microsoft, M365 Buildout Orchestrator – Software Engineering Intern May 2024 – Jul 2024

- Built pre-deployment data validators, reducing buildout errors by 30%.
- Independently developed ingestion pipeline validators under ambiguous specs.
- Delivered production-ready systems through collaboration across infra teams.

Research Projects

SynBADD & DIVA (Graduate Thesis, CVIT Lab under Jayanthi Sivaswamy)

- Developed **SynBADD**, a bidirectional generative pipeline for MRI imputation via stationary velocity fields.
- Created **DIVA**, a metadata-informed variational autoencoder disentangling temporal, structural, and disease factors.
- Achieved state-of-the-art on ADNI dataset: PSNR >33, SSIM >0.98, 3-way disease classification at 99.5% accuracy.
- Demonstrated generative modeling, disentangled representation learning, and interpretability.

Transformer Models for Text Coherence Assessment (NLP Project)

- Implemented hierarchical and multi-task Transformer architectures to assess text coherence.
- Evaluated coherence in outputs from generative systems (summarization, QA, MT).
- Advanced automated text evaluation for LLM outputs; achieved strong benchmark performance.

Spotify Sequential Skip Prediction Challenge

- Modeled sequential user behavior on 130M sessions using RNNs and causal encoders.
- Explored sequence-to-sequence and embedding-based approaches for next-event prediction.
- Directly relevant to sequence modeling in generative AI (next-token prediction).

Bayesian Continual Learning on Medical Imaging

- Built class-incremental learning pipeline using Gaussian mixture models over pretrained features.
- Mitigated catastrophic forgetting via Bayesian inference; visualized representational drift and concept stability.
- Work connects to lifelong learning and interpretability in neural networks.

Publications

- **Evidence-Driven Differential Diagnosis of Malignant Melanoma** N Akash, A Kaushik, J Sivaswamy *Medical Image Computing and Computer Assisted Intervention (MICCAI) – ISIC 2023*
- **The Anatomy of Synthesis: Simulating Changes in the Human Brain over Time through Diffeomorphic Deformations** Anirudh Kaushik *Master's by Research Thesis, IIIT Hyderabad*
- **SynBADD: Longitudinal Medical Image Imputation Via Synthetic Bidirectional Anatomy-Guided Diffeomorphic Deformations** A Kaushik, N Akash, J Sivaswamy *Under review at Medical Image Analysis*

Skills

Programming: Python, C++, C#, Shell, SQL
AI/ML: PyTorch, TensorFlow, Transformers, RNNs, VAEs, Bayesian inference, Continual Learning
Systems: MPI, Hadoop/MapReduce, CRDTs, WebRTC, Docker, MongoDB

Core Competencies: Generative Modeling, Representation Learning, Sequence Modeling, Interpretability, Lifelong Learning

Awards & Achievements

- All India Rank 21 – IIIT Hyderabad UGEE.
- Gold Medal Runner-up, 2025 Batch.
- Dean's Merit List for Academic Excellence (6 semesters), Dean's Research Award.
- Publication: MICCAI ISIC 2023 (Evidence-Driven Differential Diagnosis of Melanoma).

Leadership & Involvement

- Founder, IIIT Society for Applied Quantum Computing.
- Coordinator, 0x1337 Hacking Club.
- Webmaster, Student Life Office.