

Aaryan Garg

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EDUCATION

Birla Institute of Technology and Science, Pilani (BITS Pilani)	Oct 2021 - Present
Bachelor of Engineering (B.E) - Computer Science	(GPA: 8.88/10.0)
National Public School (Indiranagar), Bangalore	Jun 2019 - Jun 2021
Class 12th CBSE	(98.40%)

PUBLICATIONS

STPro: Spatial & Temporal Progressive Learning for Weakly Supervised STVG

Aaryan Garg, Akash Kumar, Yogesh Rawat - *Computer Vision & Pattern Recognition, 2025*

Zip-ViT: Can Learnable Tokens Trade for Dimensionality in Frozen CLIP?

Aaryan Garg, Yogesh Rawat - *In works for British Machine Vision Conference, 2025*

EXPERIENCE

Research Intern - Center for Research in Computer Vision (UCF) Aug 2023 - Present

- Trained adaptive ViT (**0.64–27 GFLOPs**), boosting classification accuracy by **12%** on smallest variant
- Optimized ZegCLIP, trading token dim for prompt tokens, reducing FLOPs **13%** at **0.77%** pAcc drop
- Designed a novel curriculum paradigm for weakly supervised STVG, achieving **SoTA** results
- Leading a comprehensive study on the short-comings of **60+ VLMs** for video grounding

MTS Intern - DevRev, Artificial Intelligence Team Jan 2025 - Present

- Developed and benchmarked an analytics agent supporting graph data filtration for KPI-driven queries
- Boosted graph retrieval **recall by 30%** through LLM-based automated description generation
- Reduced time-to-first-token for agents by **5%** by **halving token count** through payload optimization

SDE Intern - Amazon, International Machine Learning (IML) May 2024 - Jul 2024

- Implemented **3+ evaluation metrics** for RAG responses using multistep LLM-voting patterns
- Built automated data-ingestion from **3 sources**, capturing document updates and ensuring idempotency
- Revised message-thread filtering preventing ingestion of **1000+ irrelevant documents/month**
- Introduced RAG-based first-response, reducing average support-ticket FRT from **2 weeks to minutes**

Research Assistant - APPCAIR Lab, BIT's leading AI research lab Jan 2024 - May 2024

- Investigated diffusion-based infographic generation for government scheme documents in **3+ languages**
- Led the creation of a **15GB** raw image-text pair dataset for diffusion pre-training via web scraping
- Examined positional compositionality capabilities of textual-inversion in stable-diffusion models

SDE Intern - Visint LLC, Leader in AI-based parking lot surveillance Jun 2022 - Aug 2022

- Designed a semi-automated system to simplify deployed model accuracy tracking in parking lots
- Implemented automated DB snap-shotting to flag inaccuracies and enable continuous system monitoring
- Facilitated improvements in model performance from **92% to 98% accuracy within 2 months**

PROJECTS

StudyDeck - Student's Union Technical Team (SUTT) Jan 2023 - May 2023

StudyDeck empowers 3000+ students with over 700GB of recorded lectures, slides and other material

- Led the app revamp, adding lecture streaming and content aggregation from **50+** distributed drives
- Drove semantic indexing over lectures, slides and notes enabling easy natural language search

Student's Union App - Student's Union Technical Team (SUTT) Jan 2022 - Apr 2022

The SU-App facilitates \$1.5M+ in transactions for 6000+ students across 10+ vendors annually

- Built **20+** API endpoints to enable map-powered cab bookings to purchasing meals and essentials
- Initiated the development of a cross-eatery food item recommendation system for item discovery