

DIVYAM GUPTA

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Education

Northeastern University, Khoury College of Computer Sciences

Boston, MA, USA

Master of Science in Artificial Intelligence with specialization in Machine Learning

Sep. 2025 – Present

Indian Institute of Technology Bombay (IITB)

Mumbai, India

Bachelor of Technology in Chemical Engineering with Minors in Computer Science

8.82/10

Conferences and Publications

- [HiDISC](#): A Hyperbolic Framework for Domain Generalization with Generalized Category Discovery. **NeurIPS.(2025)**, ID:10148
- [OsloPrompt](#): Bridging Low-Supervision Challenges and Open-Set Domain Generalization in CLIP. **CVPR.(2025)**, ID:8276
- [SpLIP](#): Elevating All Zero-Shot Sketch-Based Image Retrieval Through Multimodal Prompt Learning. **ECCV.(2024)**, ID:3426

Technical Skills and Certifications

Languages: C, C++, Python, JavaScript, R, MATLAB, HTML, CSS, GoLang, Kotlin

ML & Analytics tools: Sci-Kit Learn, NumPy, Pandas, TensorFlow, Keras, PyTorch, Seaborn, Matplotlib, Streamlit

Developer Tools: MySQL, jQuery, Angular, MERN stack, Flutter, Django, Git, AWS cloud, Microsoft Azure

Frameworks: AutoCAD, MS Office, Adobe Illustrator and Photoshop, Figma, Canva, VScode, GitHub, WordPress

Certifications: Fundamentals of Reinforcement Learning, Supervised Machine Learning, Prompt Engineering, Programming in C/C++

Experience

MBZUAI

May 2025 – Aug 2025

Assistant Researcher

Dr. Muhammad Haris Khan | Computer Vision Dept | Abu Dhabi, UAE

- Conducted research on Multi-Label Image Classification using **CLIP** in a domain-generalized setting, leveraging **label graphs** and **dynamic prompt learning** to bridge domain shift, targeting a first-author publication at a top-tier **AI** conference or journal

MLVC Lab, IIT Bombay

Oct 2023 – May 2025

Undergraduate Researcher

Dr. Biplab Banerjee | CSRE Dept | Mumbai, India

- Pioneered cutting-edge research in **computer vision** on zero-shot image retrieval, few-shot learning, domain generalization, domain adaptation, domain generalized novel category discovery, and image deblurring, creating **state-of-the-art** AI and vision models
- Co-authored **novel** research projects leading to publications at AI conferences like **ECCV'24, CVPR'25, and NeurIPS'25**

Mercedes-Benz Research and Development India

May 2024 – Jul 2024

Research and Development Intern

Bengaluru, Karnataka

- Attained a reduction in latency by **80%** from **1 minute** to **10 seconds** and achieved **50%+** cost savings by replacing OpenAI's GPT-3.5 with Anthropic's Claude-3 Haiku for NLP API calls to Azure, after extensive research done on compatible LLMs
- Developed CI/CD pipelines for an AI-as-a-Service (AaaS) voice-activated scheduling assistant using GoLang, utilising Anthropic's Claude-3 Haiku model for NLP and Microsoft GRAPH API for data retrieval while maintaining a 2 way conversation with the user

MEDAL Lab, IIT Bombay

Jan 2024 – Apr 2024

Student researcher

Dr. Amit Sethi | Electrical Engineering Dept | Mumbai, India

- Enhanced the **WaveMix** model, a resource efficient and performance surpassing state-of-the-art **CNNs**, **ViTs**, and **token mixers** for multiple computer vision tasks by setting new benchmarks for semantic segmentation on the **Cityscapes** dataset
- Improved model's mIoU from **0.43** to **0.56** on **ADE20K** dataset for semantic segmentation by using fine-tuning methods

Shoonyatvam Foundation — DAWA.AI

May 2023 – Jun 2023

Software Engineering Intern

Nagpur, Maharashtra

- Spearheaded a team of **5** to build the startup's various B2C products, websites, user-friendly dashboards using MERN stack and EJS
- Revamped and hosted the enterprise's website on AWS cloud and reduced the computing costs by **10%**, utilising tools like Amazon EC2 virtual cloud services, Amazon RDS for databasing, within **4 hours** in collaboration with the Product and Tech teams

Research and Technical Projects

Image Classification and Artifact Identification | Inter IIT Tech, Adobe

Nov 2024 – Dec 2024

- Led a team of **10** to develop a Computer Vision model robust to Adversarial Attacks for AI image identification and classification
- Researched, experimented with, and fine-tuned state-of-the-art **VQA VLMs** for item identification and explanation generation

Predictive capability in the sustainability data tracker of UPL | SLP-IDP, IIT Bombay

Aug 2024 – Nov 2024

- Designed a **Machine Learning** model for predicting the carbon footprint of **UPL** unit 7 and built an interactive **Streamlit** UI for gaining valuable insights for achieving Net Zero in their carbon emissions via their Data Tracker, using Python and Data Analysis

Unsupervised Image Captioning | RnD Project, IIT Bombay

Jan 2024 – Mar 2024

- Modified **CVPR 2023** paper on state-of-the-art zero-shot image-specific prompt learning using generative model adaptation for unsupervised image captioning, improving training time and reducing the initial model parameters
- Utilized zero-shot **StyleGAN** for model training and **OpenAI's CLIP** model for feature extraction, using the Flickr8k dataset for captioning. Efforts were made to eliminate the need for a pre-trained baseline model to enhance performance