

Dheeraj Varghese

Researcher focusing on multi-modal learning with experience in large scale training

Nationality Indian

Languages English (C1), Malayalam

Amsterdam, The Netherlands

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in [in/dheeraj-varghese](https://www.linkedin.com/in/dheeraj-varghese)

🌐 [dhevarghese](https://dhevarghese.github.io)

EXPERIENCE

Research Engineer

Universiteit van Amsterdam

📅 Feb 2025 – present 📍 Amsterdam, Netherlands

- Co-authored [NeoBabel](#), a multilingual model for image generation with unified autoregressive and diffusion objectives.
- Led distributed training of 2B-parameter models on H100 and MI250x clusters using [DeepSpeed](#).

Research Collaborator

Boston University & NYU

📅 Nov 2024 – present 📍 Remote

- Co-authored [TaxonomiGQA](#), showing vision-language training aids deployment of taxonomic knowledge.
- Implemented [vLLM](#)-based inference and modified HuggingFace [Transformers](#) to extract visual embeddings.

Teaching Assistant

Vrije Universiteit

📅 Apr 2024 – May 2024 📍 Amsterdam, Netherlands

- Tutored students on different topics in Natural Language Processing, under [dr. Lucia Donatelli](#).
- Previously, as a TA for [Learning Machines](#), guided students in designing DQN networks for diverse robot tasks

Applied Research Intern

Pennsylvania State University

📅 Jan 2022 – July 2022 📍 State College, PA

- Built an intuitive web interface and visualization of [RAGNAROC](#), a computational model of human visual attention; hosted by [dr. Brad Wyble](#).

PROJECTS

ClipCap Evolved

- Extended the [ClipCap](#) approach with FLAN-T5; achieved better CIDEr/SPICE with only 7M trainable params. ([Blogpost](#), [Code](#)).

Amrita Repository

- [Android app](#) for academic resources with 10K+ downloads and 5K+ monthly active users. ([Code](#))

EDUCATION

PhD, Artificial Intelligence

University of Amsterdam, VIS lab

📅 Aug 2025 📍 Amsterdam, Netherlands

- Research as part of Horizon Europe [ELLIOT](#) project, focusing on generalist multimodal foundation models; supervised by [Cees Snoek](#)

Master of Science, Artificial Intelligence

Vrije Universiteit

📅 Sep 2022 – Aug 2024 📍 Amsterdam, Netherlands

- Supervisors: [dr. Yuki Asano](#) and [Mohammad Derakhshani](#)
- [My research](#) focused on curriculum learning in Visual Language Models.
- Granted VUFP, 100% scholarship
- Courses on AI, including DL, NLP, Multi-Agent Systems, Medical AI and Interpretability.
- Final GPA: 8.5 (Dutch grading system).

B. Tech, Computer Science and Engineering

Amrita Vishwa Vidyapeetham

📅 Jul 2018 – Jun 2022 📍 Coimbatore, India

- Conducted workshops as DL Lead, in the Google Developer Student Club.
- Final GPA: 9.13 (Indian grading system).

AWARDS

Secured Compute Grants: Cohere For AI (\$3,000), Google Cloud (\$5,000), LUMI (150K GPU Hours), Snellius (166K GPU Hours).

SKILLS

DL Frameworks: PyTorch (2021-present, R&T), Tensorflow (2021-2023), HuggingFace (2022-Present, R) (R - Research, T - Teaching)

Programming languages: Python (2019-present), HTML (2016-present), Java (2014-2022), C (2018-2022)

Additional skills: SLURM cluster (2023- present), git (2020-present), Docker (2020-present)