

XAVIER THOMAS

✉ xavierohan1@gmail.com

🏠 xavierohan.github.io

in LinkedIn

🎓 Google Scholar

🐙 GitHub

EDUCATION

Boston University

Master of Science in Artificial Intelligence

Sept 2023 - May 2025

Manipal Institute of Technology

Bachelor of Technology in Electronics and Instrumentation

Advisor: Prof. Deepti Ghadiyaram

July 2018 – Aug 2022

RESEARCH & WORK EXPERIENCE

Boston University | Advisors: Prof. Deepti Ghadiyaram, Prof. Thomas Gardos

Jan 2024 - Present

Research Assistant

- **MS Thesis:** Investigating **Vision-Language Models (VLMs)** and developing improved visual feature representation methods. Additionally, exploring diffusion model features to improve VLM performance in downstream tasks.
- **Edubotics AI:** Created and maintaining an open-source Python package for creating customized, research-backed LLM based applications, built and deployed a digital teaching assistant for Boston University courses. [🔗 Code](#) | [📦 PyPI](#)

ShareChat

July 2022 - June 2023

Machine Learning Engineer Intern / Content and User Understanding Team

- Integrated an **advanced computer vision pipeline** into **production**, improving content classification accuracy and platform safety for ShareChat (180M+ MAUs) and Moj (160M+ MAUs).
- Developed an **AI-powered content creation tool**, used to seed content in ShareChat's platforms.
- Engineered an **Automated News Aggregation Dashboard** that compiles daily news into genre-specific video snippets, streamlining content delivery and boosting user engagement and viewer retention.
- Launched **"Natasha"**, an **AI assistant** within ShareChat's messaging service, enhancing user engagement.
- Developed **"MAViC"**, a **novel algorithm for Multimodal Active Learning**, optimizing data collection for video captioning models and reducing annotation costs. [📄 Paper](#)

Searce Inc

Jan 2022 - July 2022

Machine Learning Engineer Intern

- Developed a chatbot to automate a client's IT helpdesk with tasks such as user verification, account unlocking, and password resets, resulting in enhanced operational efficiency and increased user satisfaction.
- **Led client meetings** to ensure project outcomes were aligned with client expectations while serving as the **technical lead for a team of three**. Oversaw the development and deployment of the chatbot to production.

Serre Lab, Brown University | Advisors: Prof. Thomas Serre, Dr. Victor Boutin

Sept 2021 - May 2022

Research Intern

- Designed a **novel framework for evaluating one-shot generative models** based on sample recognizability and diversity, contributing to advancements in model evaluation methodologies.
- Conducted a systematic evaluation comparing model performance with human benchmarks using the Omniglot dataset, leading to a publication at **NeurIPS 2022**. [🔗 Code](#) | [📄 Paper](#)

Massachusetts Institute of Technology | Advisor: Dr. Abhimanyu Dubey

Jan 2022 - July 2022

Research Assistant

- Created a **novel algorithm to recover domain information** by removing class-specific noise from features, enabling the learning of **privacy-preserving, domain-adaptive classifiers**. [🔗 Code](#) | [📄 Paper](#)
- Achieved performance improvements on **domain generalization benchmarks**: PACS (+3.4%), VLCS (+2.5%), OfficeHome (+0.5%), DomainNet (+1.9%), and TerraIncognita (+1.7%).

PUBLICATIONS, PREPRINTS, AND WORKING PAPERS

MAViC: Multimodal Active Learning for Video Captioning

Gyanendra Das, **Xavier Thomas**, Anant Raj, Vikram Gupta

Diversity vs. Recognizability: Human-like generalization in one-shot generative models (**NeurIPS**, 2022)

Victor Boutin, Lakshya Singhal, **Xavier Thomas**, Thomas Serre

Adaptive Methods for Aggregated Domain Generalization

Xavier Thomas, Dhruv Mahajan, Alex Pentland, Abhimanyu Dubey

SKILLS

Languages: Python, MATLAB, C++, SQL, HTML/CSS, TypeScript, Node.js

Tools & Technologies: PostgreSQL, SQLite, Redis, Streamlit, Django, FastAPI, Chainlit, LangChain, Hugging Face Transformers, PyTorch, NumPy, Accelerate, Docker, Kubernetes, Jenkins, Spinnaker, Google Cloud, Git, Jira, WebSocket, gRPC, Open MPI