

Sahal Shaji

PhD in Computer Vision | MBZUAI

 UAE Golden Visa



PhD student in Computer Vision at Mohamed bin Zayed University of Artificial Intelligence, advancing multilingual multimodal medical foundation models for accessible, clinically grounded, and generalizable healthcare AI.

Education

2023.08
- Present

PhD in Computer Vision

Mohammed bin Zayed University of Artificial Intelligence (MBZUAI), Abu Dhabi UAE

- UAE Golden Visa

2023.05

Master of Science Computer Vision

(MBZUAI), Abu Dhabi UAE

- Cumulative GPA 3.84 / 4.0

2021.05

Computer Science Engineering

National Institute of Technology (NIT), Puducherry India

- Cumulative GPA 9.04 / 10

2017.03

Senior School Examination (Grade 12)

Indian High School, Dubai UAE

- Cumulative Percentile 94.3 %

2015.03

Secondary School Examination (Grade 10)

Indian High School, Dubai UAE

- CGPA 10

Professional Experience



AI Architect

Aspire Zone | Intaleq

June 2025



Machine Learning Intern

Microsoft, Dubai Internet City - [Link](#)

May 2019



Machine Learning Engineer

Gen Dept of Artificial Intelligence, Dubai Police HQ

Sep 2022

Research Interests

- Multilingual Multimodal Medical Foundation Models
- Open-Ended Medical Reasoning and Reinforcement Learning
- Medical Image and Volumetric Reasoning
- Object Detection and Visual Grounding
- AI for Embedded and Edge Devices
- Clinically Grounded and Interpretable AI for Healthcare

 WEBSITE  LinkedIn  Google Scholar

Personal Data

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Languages Known

- English
- Malayalam
- Hindi
- Arabic

Key Skills

- Analytical Reasoning
- Problem Solving
- Effective communication
- Abstract Thinking
- Alternative Solution
- Competitive Coding

Programming Languages

C / C ++



Intermediate

Python



Advanced

C#



Advanced

Java



Intermediate

Dart/Flutter



Advanced

Research Highlights

- First / co-author publications at leading AI venues including **EMNLP**, **ACL**, **AAAI**, **CVPR**, and **NeurIPS**, with contributions across multilingual medical LLMs, multimodal medical AI, open-ended reasoning, visual grounding, and general-purpose multimodal systems.
- **Meta Llama Impact Innovation Award** for **BiMediX2**, an Arabic-English medical multimodal model covering diverse clinical image modalities. This work was accepted to **EMNLP 2025 Findings** and was featured on **LinkedIn by Yann LeCun**.
- Recipient of the **MBZUAI CV Department Emerging Impact Award 2026**.
- Co-author on **MAviS**, recognized with the **EMNLP 2025 Senior Area Chair Highlight Award**.
- Research supported by the **NVIDIA Academic Grant** and the **MBZUAI-IIT Delhi Research Grant**, with related work showcased at international platforms including **GITEX 2024**, **Machines Can See 2025**, and the **AI4SD side event of the 79th UN General Assembly**.
- Strong academic and open-source impact, with **1,000+** citations, **2,000+** GitHub stars, and nearly **1M** downloads of publicly released models and datasets.
- Recipient of a granted **US Patent** for open-world semi-supervised object detection, with additional U.S. patent filings in bilingual medical LLMs and pixel-grounded multimodal models.
- **JAIS Climate**, showcased at **COP28**, extended earlier work on **Arabic Mini-ClimateGPT**, published at EMNLP 2023 Findings.

Publications

BiMediX2: Bio-Medical EXpert LMM for Diverse Medical Modalities

*Sahal Shaji Mullappilly**, Mohammed Irfan Kurpath*, Sara Pieri, Saeed Yahya Alseiari, Shanavas Cholakkal, Khaled Aldahmani, Fahad Khan, Rao Anwer, Salman Khan, Timothy Baldwin, Hisham Cholakkal

[EMNLP 2025 - Findings](#) | [Meta Llama Impact Award](#) | [LinkedIn Feature](#)



9.1K+ HF Downloads
(models + datasets)

GLaMM: Pixel Grounding Large Multimodal Model

*Hanoona Rasheed**, Muhammad Maaz*, *Sahal Shaji Mullappilly*, Abdelrahman Shaker, Salman Khan, Hisham Cholakkal, Rao M Anwer, Eric Xing, Ming-Hsuan Yang, Fahad S Khan

[CVPR 2024 - \(arXiv 2023\)](#) | [HuggingFace Featured](#) | [GitHub](#)



707K+ HF Downloads
(models + datasets)

MediX-R1: Open Ended Medical Reinforcement Learning

*Sahal Shaji Mullappilly**, Mohammed Irfan Kurpath*, Omair Mohamed, Mohamed Zidan, Fahad Khan, Salman Khan, Rao Anwer, Hisham Cholakkal

[arXiv 2026](#) | [MediX-R1](#) | [GitHub](#) | [MiddleEast AI News](#)



10.6K+ HF Downloads
(models + datasets)

BiMediX: Bilingual Medical Mixture of Experts LLM

*Sara Pieri**, *Sahal Shaji Mullappilly**, Fahad Shahbaz Khan, Rao Muhammad Anwer, Salman Khan, Timothy Baldwin, Hisham Cholakkal

[EMNLP 2024 - Findings](#) | [GitHub](#)



149K+ HF Downloads
(models + datasets)

MAviS: A Multimodal Conversational Assistant For Avian Species

Yeveheniia Kryklyovets, Mohammed Irfan Kurpath, *Sahal Shaji Mullappilly*, Jinxing Zhou, Fahad Shahbaz Khan, Rao Muhammad Anwer, Salman Khan, Hisham Cholakkal

[EMNLP 2025](#) | [SAC Highlight Award](#) | [GitHub](#)

LLMVoX: Autoregressive Streaming Text-to-Speech Model for Any LLM

Sambal Shikhar, Mohammed Irfan Kurpath, Sahal Shaji Mullappilly, Jean Lahoud, Fahad Shahbaz Khan, Rao Muhammad Anwer, Salman Khan, Hisham Cholakkal

[ACL 2025 - Findings](#) | [GitHub](#)

XrayGPT: Chest Radiographs Summarization using Large Medical Vision-Language Models

Omkar Chakradhar Thawakar, Abdelrahman M Shaker*, Sahal Shaji Mullappilly*, Hisham Cholakkal, Rao Muhammad Anwer, Salman Khan, Jorma Laaksonen, Fahad Khan*

[ACL 2024 - BioNLP](#) | [GitHub](#)

Arabic Mini-ClimateGPT: A Climate Change and Sustainability Tailored Arabic LLM

Sahal Shaji Mullappilly, Abdelrahman Shaker*, Omkar Thawakar*, Hisham Cholakkal, Rao Muhammad Anwer, Salman Khan, Fahad Khan*

[EMNLP 2023 - Findings](#) | [NeurIPS 2023 - ENLSP](#) | [GitHub](#)

A Benchmark and Agentic Framework for Omni-Modal Reasoning and Tool Use in Long Videos

Mohammed Irfan Kurpath, Jaseel Muhammad Kaithakkodan*, Jinxing Zhou, Sahal Shaji Mullappilly, Mohammad Almansoori, Noor Ahsan, Beknur Kalmakhanbet, Sambal Shikhar, Rishabh Lalla, Jean Lahoud, Mariette Awad, Fahad Shahbaz Khan, Salman Khan, Rao Muhammad Anwer, Hisham Cholakkal*

[CVPR 2026 - Findings](#) | [GitHub](#)

Semi-supervised Open-World Object Detection

Sahal Shaji Mullappilly, Abhishek Singh Gehlot, Rao Muhammad Anwer, Fahad Shahbaz Khan, Hisham Cholakkal

[AAAI24 - Main Track](#) | [GitHub](#)

MuCoT: Multilingual Contrastive Training for Question-Answering in Low-resource Languages

Gokul Karthik Kumar, Abhishek Gehlot, Sahal Shaji Mullappilly, Karthik Nandakumar

[ACL 2022 - DravidianLangTech Oral](#) | [GitHub](#)

Patents

System and method of open-world semi-supervised satellite object detection

Sahal Shaji Mullappilly, Abhishek Singh Gehlot, Rao Muhammad Anwer, Fahad Shahbaz Khan, Hisham Cholakkal

[US Patent Granted - US12380677B2](#)

Bilingual medical mixture of experts large language model

Sara Pieri, Sahal Shaji Mullappilly, Fahad Shahbaz Khan, Rao Muhammad Anwer, Salman Khan, Timothy Baldwin, Hisham Cholakkal

[US Patent Pending - US20250266037A1](#)

System and method of pixel grounding large multimodal model

Hanoona Rasheed, Muhammad Maaz, Sahal Shaji Mullappilly, Abdelrahman Shaker, Salman Khan, Hisham Cholakkal, Rao M Anwer, Eric Xing, Ming-Hsuan Yang, Fahad S Khan

[US Patent Pending - US20260017926A1](#)

Projects

DriveSafe — Real-time Driving Threat Detection | [Demo-Link](#)

- Cross-platform app developed using Flutter, works on Android, iOS and watchOS.
- Continuously monitors road conditions and alerts potential threats to the driver.
- Quantized SSD Mobilenet v2 is used for Object Detection.
- Model performance is optimized using Metal GPU delegate and Neural Processing cores (Achieves an average inference time of 30 milliseconds).

DocApp — Clinic Digitalization System

- Zero-cost clinic management system based on smartphones.
- Cross-platform app developed using Flutter and Firestore as backend.
- Book appointments and stream live token to client application in real-time.
- Features patient database and analytics dashboard.

Interdisciplinary Projects

- Arduino based plant hydration system.
- Electric Bike (Presented in college Techfest).
- Food Delivery Application (Mango).
- Package delivery drone (IIT Bombay eYantra Robotics Competition).

Honors & Awards

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|---|-------------|
| ▪ Emerging Impact Award – MBZUAI CV Dept | 2026 |
| ▪ US Patent (US12380677B2) on Open World Satellite Object Detection | 2025 |
| ▪ Meta Llama Impact Innovation Award (BiMediX2) | 2024 |
| ▪ UAE Golden Visa (Outstanding University Student) | 2023 |
| ▪ ADAFSA Abu Dhabi Govt Hackathon – Winning Team (AED 30,000) | 2021 |
| ▪ Bachelor of Technology – First Class with Distinction | 2021 |
| ▪ SPDC Indian Govt Merit Scholarship Grant (16,000\$) | 2017 |
| ▪ Academic Excellency Letter from Education Minister India (MHRD) | 2015 |

Courses

- Applied Data Science with Python - **University of Michigan**
- Machine Learning - **University of Stanford**
- **Kaggle** Deep Learning, Machine Learning, Feature Engineering
- Deep Learning Specialization - Coursera
- **CS50** Introduction to Artificial Intelligence

References

- Dr. Hisham Cholakkal | Assistant Professor MBZUAI | hisham.cholakkal@mbzuai.ac.ae
- Dr. Surendiran | Assistant Professor NITPY | surendiran@nitpy.ac.in
- Rahul Mathew | IT Specialist – Microsoft Dubai | v-rahum@microsoft.com