# Ekansh Chauhan

3068652c@student.gla.ac.uk ◇ +44 7741556924 ◇ ekansh09.github.io ◇ Glasgow, UK

## OBJECTIVE

PhD candidate in Medical Imaging and AI, specializing in deep learning and LLM systems, seeking a part-time or internship role as a Machine Learning / LLM Engineer to build and deploy reliable ML systems.

## EDUCATION

**PhD in Cancer Sciences**, Cancer Research UK & Uni. of Glasgow, Scotland, UK — Expected 2028
**Master of Computer Science**, IIIT Hyderabad, India — 2022-2024
**Bachelor of Computer Science**, GGSIPU University, Delhi, India — 2017 - 2021

## SKILLS

| | |
|---|---|
| Languages: | Python, Java, SQL |
| ML & LLM: | PyTorch, TensorFlow, Transformers, LLaMA, RAG, LoRA/QLoRA |
| Data & CV: | NumPy, Pandas, OpenCV, scikit-learn |
| Systems & Deployment: | Linux, Docker, Git, Slurm, TensorRT, OpenTelemetry |
| Cloud & Compute: | AWS (SageMaker, EC2, S3), Azure (VMs) |
| Databases & APIs: | MySQL, REST APIs, Vector Databases |

## EXPERIENCE

**Research Fellow – Computational Biology** — Nov 2024 - Current
Cancer Research UK, Scotland Institute — *Glasgow, UK*

- Designed a multi-modal AI framework using Deep Learning and Sparse CCA to integrate high-dimensional single-cell transcriptomics with fine-scale tissue morphology.
- Validated framework on pan-cancer 10x Xenium datasets, identifying statistically significant gene–histology correlations.

**Research Fellow – Cancer Diagnostics** — May 2021 - Oct 2024
Centre for Visual Information Technology (CVIT), IIIT-H — *Hyderabad, India*

- Developed interpretable high-performance DL pipelines for giga-pixel histopathology imagery, achieving an 83.52% F1 score in breast cancer subtype classification and outperforming benchmarks by 5.35%.
- Curated a large-scale data lake of histopathology samples across 7+ cancer subtypes (Brain, Lung, Oral, etc.).
- Achieved a 106× parameter reduction and 76% inference speedup via model compression and optimization, enabling real-time cardiovascular disease detection from 2-lead ECG signals on resource-constrained systems.

**Computer Vision Intern** — Dec 2023 - Feb 2024
Game Theory, Bangalore — *Bangalore, India*

- Deployed real-time, edge-optimized footfall tracking on Raspberry Pi 5 and Jetson Nano using TensorRT.
- Deployed a cloud-based 3D shuttle tracking system for badminton using multi-camera triangulation and YOLOv8.

## SELECTED PUBLICATIONS & PROJECTS

- **Nature** (2025): *MAPK-driven epithelial cell plasticity drives colorectal cancer therapeutic resistance* [Paper]
- **Nature Scientific Data** (2024): *IPD-Brain: An Indian histopathology dataset for glioma subtype classification*[Paper]
- **MIDL** (2024): *Lupus Nephritis Classification with only Slide-Level Labels*[Paper]

*Note: Full publication list available on Google Scholar*

- *Smart Lightweight Medical Query System (LLMs / RAG)* - Built an edge-deployable medical QA system using LangChain + FAISS; reduced model size from 13.5 GB → 2.5 GB via distillation and quantization. [Link]
- *1D Grad-CAM* - Developed model interpretability method for signal classification. [Link]

## ACHIEVEMENTS

- Awarded the **Cancer Research UK** Core Fellowship for PhD studies in Cancer Sciences.
- Granted a fully funded fellowship by the **Department of Science and Technology, Government of India** for a MS by Research in Artificial Intelligence.
- Secured **1st rank** at the school level and **4th rank** at the state level in the Mathematics Olympiad.
- Served as a Teaching Assistant for Advanced NLP and Cognitive Science.
- Conference Technical Organizer for international conferences in the UK, Poland, and India.