MOHITA CHOWDHURY

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Education

University of Oxford, Department of Computer Science — Oxford, UK
Master of Science in Computer Science | *Grade: Merit* — Oct 2020
Relevant Coursework: Advanced Machine Learning, Artificial Intelligence, Computational Game Theory

National Institute of Technology Karnataka, Surathkal (NITK) — Surathkal, India
Bachelor of Technology in Electronics and Communication Engineering | *GPA:* 9.36/10, *Class Rank:* 6/110 — May 2019

Experience

Ufonia — Oxford, UK
Senior AI Research Engineer — Oct 2020 - Present

- Leading AI R&D to improve Ufonia's conversational assistant for autonomous telemedicine. Current focus is on the integration of LLMs into our regulated clinical product.
- Leading a clinical trial and managing stakeholders to support multilingual deployment in the Netherlands.
- Reduced deployment time by 60% by streamlining ML training and testing workflows.
- Achieved 98% PII redaction in production data by developing and deploying in-house anonymisation model.
- Developed a self-supervised learning-based approach to improve transcriptions in low-data settings.

Nanyang Technological University Singapore — Singapore
Research Assistant at Hardware and Embedded Systems Lab — May 2018 - Jul 2018

- Designed a computationally inexpensive algorithm to remove false positives from foreground detectors for automated nighttime traffic surveillance, in collaboration with TU Munich (TUMCreate Project). View results here.

Indian Institute of Technology, Delhi (IITD) — Delhi, India
Research Intern at Samsung Innovation Lab — May 2017 - Jul 2017

- Designed an algorithm to improve image segmentation in cluttered backgrounds by leveraging depth from stereo image pairs. View results here

Selected Publications

- **M Chowdhury***, E Lim*, A Higham, R McKinnon, N Ventoura, Y He, N de Pennington *"Can large language models safely address patient questions following cataract surgery?"*, Investigative Ophthalmology & Visual Science (an ARVO Journal) 2023 [Abstract], Clinical NLP Workshop at ACL 2023 *(Oral Presentation)*.
- OW Gardiner, **M Chowdhury**, E Lim, A Higham, N de Pennington *"Can deep learning models understand natural language descriptions of patient symptoms following cataract surgery?"*, Investigative Ophthalmology & Visual Science (an ARVO Journal) 2022 [Abstract], Women in ML Workshop at NeurIPS 2022. [Poster]
- **M Chowdhury**, OW Gardiner, Y Miao *"A Simple Phoneme-based Error Simulator for ASR Error Correction"*, Women in ML Workshop at NeurIPS 2022. [Poster], RelKD Workshop at KDD 2023 *(Spotlight Presentation)*.
- **M Chowdhury**, H Shah, T Kotian, N Subbalakshmi, SS David, *"Copy-Move Forgery Detection using SIFT and GLCM-based Texture Analysis"*, TENCON - IEEE Region 10 Conference 2019. [Paper]

Academic Projects

Zero-shot Human-Object Interaction Detection (ZS - HOID) — Apr 2020 – Sept 2020

- Invented VLS-Net, a model that combines visual, spatial and language modalities and recognises interactions in both fully-supervised and zero-shot settings. Surpassed state-of-the-art methods by 8% mAP on 120 zero-shot compositions from the HICO-DET dataset.

Robust Copy-Move Forgery Detection under Multiple Geometrical Transformations — Jul 2018 – Apr 2019

- Devised a framework for robust detection of copy-move forgeries in images. Reduced false positives from 56% to 34.34% on the COVERAGE dataset.

Skills

Programming Languages:	Python, C++, C, TypeScript
Tools and Frameworks:	PyTorch, TensorFlow, GCP, AWS, LangChain, HuggingFace, Docker

Select Awards

- Oxford and Cambridge Society of India Scholarship. — 2019
- NTU-India Connect Scholarship. — 2018