**KIT MILLS BRANSBY**

## PROFILE

A creative, well-presented and resourceful computer scientist focusing on applications of deep learning and vision in healthcare. Former live music agent and project manager. I possess excellent communication skills, enthusiasm and an exceptional work ethic driven by a deep-rooted passion for altruistic, forward thinking technology.

## EDUCATION

**Queen Mary University Of London** (2022-Present) **:** PhD. AI-based Cardiac Image Computing
- Research: 3D reconstruction of coronary vessels, semantic segmentation using graph neural networks, segmentation using joint dense-point representations, polygon-based segmentation.
- Supervision: Qianni Zhang (QMUL), Greg Slabaugh (QMUL), Christos Bourantas (QMUL / NHS)

**Queen Mary University Of London** (2021) **:** MSc Data Science & Artificial Intelligence.
- Research: Deep Learning for Small Bowel Motility Assessment in Crohn's Patients.
- Supervision: Prof Greg Slabaugh (QMUL) and Dr Asma Fikree (Royal Hospital London NHS)
- Grade: Distinction (90%)

**University Of Sussex** (2011-2015) **:** BSc (Hons) Chemistry. 2:1 class

## PUBLICATIONS (* indicates first author)

- **K.Bransby***, G.Slabaugh, C.Bourantas, Q.Zhang. - MICCAI (2023) - *"Joint Dense-Point Representation for Contour-Aware Graph Segmentation"* (pre-print)
- **K.Bransby***, V. Tufaro, M.Cap, P.Kitslaar, H.Reiber, G.Slabaugh, C.Bourantas, Q.Zhang. - ISBI (2023) - *"3D Coronary Vessel Reconstruction from Bi-Plane Angiography using Graph Convolutional Networks."*
- X.Huang*, R.Bajaj*, N.Alves-Kotzev, J.Weyers, M.Levine, M.Garg, S.Maung, H.Garcia, **K.Bransby**, R.Torii, R.Krams, A.Marthur, A.Baumbach, Q.Zhang, B.Courtney, C.Bourantas. - Diagnostic and Therapeutic Applications of Light in Cardiology (2023) - *"Histology-trained deep learning model for automated coronary plaque composition assessment in combined intravascular ultrasound-optical coherence tomography images"*
- R.Bajaj*, X.Huang*, N.Alves, J.Weyers, M.Levine, M.Garg, S.Maung, **K.Bransby**, R.Torii, R.Krams, others - Journal of the American College of Cardiology (2022) - *"Histology-Trained Deep Learning Methodology for Automated Coronary Plaque Component Classification in Combined Intravascular Ultrasound-Optical Coherence Tomography Images"*

## SKILLS

- *Python* (4yr experience) + data science packages (*Sklearn, Pandas, Numpy* etc)
- Deep learning frameworks (*Pytorch, Tensorflow*) and image processing (*OpenCV, PIL, SITK, VTK*)
- Extensive network building experience (*CNN, Graph, LSTM, Transformer*) for tasks such as classification, reconstruction, segmentation, object detection, registration.
- Cloud-based GPU clusters and high performance environments (*bash, linux, conda*)
- Experience handling and processing large high-dimensional image datasets (e.g *X-ray, RGB, Ultrasound, 3D, Mesh, DICOM*)

## TEACHING

- Teaching assistant for MSc modules: Neural Networks and Deep Learning (Dr. Yorgos Tzimiropoulos), Information Retrieval (Dr. Qianni Zhang), Data Mining (Dr. Emmanouil Benetos), Python Programming

**References:**

Dr Qianni Zhang - Senior Lecturer at Queen Mary University London - qianni.zhang@qmul.ac.uk
Prof Greg Slaubaugh - Professor of Computer Vision and AI at Queen Mary University London - g.slabaugh@qmul.ac.uk