Rhydian Windsor

COMPUTER VISION DPHIL STUDENT

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Education

Visual Geometry Group, University of Oxford   *Oxford, UK*

DPHIL   *October 2019-*

- Working computer vision for automated analysis of spinal disease using with a focus on cancer. Supervised by Professor Andrew Zisserman and Dr. Timor Kadir.

Autonomous Intelligent Machines and Systems CDT, University of Oxford   *Oxford, UK*

TAUGHT COURSE TRAINING YEAR   *2018-2019*

- Studies funded by Cancer Research UK (Oxford Centre Prize Scholarship).
- CDT programme consists of six months of taught modules followed by two 3-month projects before embarking on 3 year DPhil.
- Took modules on a wide range of topics related to machine learning including; *Computer Vision, Reinforcement Learning, Robotics, Control, Optimization, Verification, Embedded Systems Programming*.

University of Manchester   *Manchester, UK*

MASTER OF PHYSICS (MPHYS)   *2014-2018*

- Graduated with a first class degree (78.9% average).
- Thesis topic: *Differentiating Shrinkage and Erosion of tumours in Lung Cancer CBCT Scans* @ Radiotherapy Related Research Group, Christie Hospital. Supervised by Professor Anna Scaife and Dr. Andrew McWilliam.

Publications & Research Output

Conference Papers

- 'The Ladder Algorithm: Finding Repetitive Structures In Medical Images By Induction', Rhydian Windsor & Amir Jamaludin, *ISBI 2020, Under Review*

Posters

- 'A Novel Methodology To Differentiate Shrinkage versus Erosion in CBCT Images Of Lung Tumours', George Needham*, Rhydian Windsor*, Marianne Aznar, Eliana Vasquez Osorio, Marcel van Herk, William Beasley, Alan McWilliam. *ECMP 2018,* Best Poster Award
- 'Getting Accurate Full Spine Segmentations Without Ground Truths', Rhydian Windsor, Amir Jamaludin, Timor Kadir, Andrew Zisserman. *AIMS Annual Meeting 2019*, 2nd Best Poster Award

*: Indicates authors contributed equally

Skills

Languages	Python (Strong); C++, MATLAB (Moderate but a bit rusty); R, Javascript (Some Experience)
Frameworks	Pytorch, Tensorflow, jQuery, Flask, Reveal.js
Other	LaTeX, HTML/CSS, UNIX, Git

Experience

JBCA Machine Learning Group   *Manchester*

ORGANISING COMMITTEE   *2018 - 2019*

- Helped organise several informal talks & hack nights giving astrophysics PhD students hands-on experience in machine learning
- Work included negotiating budget with JBCA financial committees and writing tutorials and challenges for attendees

Axilium Research   *Cape Town/Manchester*

RESEARCH INTERNSHIP   *Summer 2018*

- Commissioned by V&A Waterfront in Cape Town, South Africa to develop a prototype footfall mapping system using computer vision techniques on footage from security cameras at the Waterfront.
- My first real experience of ML, project report can be found at `https://tinyurl.com/wm5q59j`

STEM Learning   *Manchester*

STEM AMBASSADOR   *2016 - 2018*

- During undergraduate degree volunteered as STEM ambassador.
- Attended several science festivals across Manchester talking about physics to the general public.

Other Interests

- Outside of work I enjoy sports, in particular running, rugby and bouldering. I play chess a bit and am a member of the University's chess club.

- I also enjoy learning languages and am currently taking a course in French working towards approx. B2 proficiency. My learning tends to take the form of watching Netflix's french language selection and constantly asking questions to students in my office who speak it.