

James O'Connor

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PROJECTS

SENTINEL BOT

Twitter account which posts a Sentinel-2 satellite image every 30 minutes |

http://twitter.com/sentinel_bot

PERSONAL BLOG

Details aspects of my research, with explanations and tutorials |

jamesoconnorkingston.wordpress.com

GREYSCALER

Esoteric greyscaling algorithms via django web app |
tinyurl.com/greyscale

EXPERTISE

Python
Web Development (Django)
Predictive Modelling
Scikit-learn
Tensor Flow
OpenCV
Data Science
Databases
Image Processing
GIS/Mapping

LINKS

LinkedIn:// jamesoconnor12
Github:// JamesOConnor
Twitter:// James_O_Connor1
Wordpress:// jamesoconnorkingston
Website:// jp-oconnor.com
Kaggle:// jamesOc

SKILLS

COMPUTING

Languages

Python • Linux • Django • Javascript •
Imagemagick • MSSQL • Tensor Flow • git

Software packages

Microsoft office • PyCharm IDE •
ArcGIS/QGIS

LANGUAGES

English (Native)
Spanish (Fluent)
French (Basic)

EDUCATION

KINGSTON UNIVERSITY LONDON | PHD CANDIDATE

September 2014 - Present | London, UK

Thesis entitled 'Optimisation of aerial surveying from Unmanned Aerial Vehicles (UAVs)'. Used custom image processing techniques developed using python OpenCV and photogrammetric packages for generation of detailed 3D data using Structure-from-Motion (SfM) photogrammetry. Visualisation of large datasets using python's seaborn library.

UNIVERSITY COLLEGE LONDON | REMOTE SENSING MASTERS | DISTINCTION

September 2013 - September 2014 | London, UK

Thesis investigated the accuracy of a radiative transfer model (Joint Research Council's two-stream inversion package). Used large amounts of satellite data (MODIS) for comparison using custom python scripts.

TRINITY COLLEGE DUBLIN | BACHELOR OF SCIENCE | 2:1

September 2006 - September 2010 | Dublin, Ireland

Thesis investigated biodiversity of urban pollinators in Dublin city centre and methods for promoting diversity. Fieldwork skills in generating data for Environmental Impact Assessments.

EXPERIENCE

DIGITAL MAPPING ASSISTANT October 2014 - October 2017

Provided technical support for classes of up to 70 undergraduates. Engaged with students learning GIS and provided support for a range of tasks assigned, from basic cartography in a GIS environment to web app development.

SENSED EDITOR

June 2015 - present

Have sat in council meetings and engaged in discussions on how to grow the society. Organised and ran a 3 day conference at Kingston in March 2017 as part of my duties. SENSED is a quarterly magazine produced by the society, of which I am an editor.

DEVELOPER - QUARTZ SYNDICATE

November 2015 - November 2017

Used python scikit-learn toolbox to train models in prediction of outcomes of sporting events. Specific tools include logistic regression, tree-based learners (LightGBM) and tensor-flow neural networks to refine predictions.

PAPERS

2017 Cameras and settings for aerial surveys in the geosciences: optimizing image data
Progress in Physical Geography - DOI

SELECTED CONFERENCE PRESENTATIONS

2017 European Geophysical Union AGM, Talk
'Raw Image processing in structure-from-motion (SfM) surveying'

SOCIETIES

2014 - Present Remote Sensing and Photogrammetry Society