



BRIAN FORMENTO

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Experience

Researcher – Data science | CV 08/2019 – present
National University of Singapore, Singapore

Using 4 unstructured retinal fundus datasets to detect stages of chronic kidney disease. Using deep learning and computer vision with PyTorch.

Intern – Signal processing 07/2017 – 09/2017
Roke Manor Research, United Kingdom

Working with Matlab, C and Python, for the implementation of a researched SP algorithm.

Intern – Electronic engineer 07/2016 – 09/2016
L3 ASV, United Kingdom

Designed a PCB, reduced costs by £1450 per item.

Projects

Advanced ML project 01/2019 – 07/2019
National University of Singapore, Singapore

Used video data and one-shot learning with a recurrent convolutional neural network in a Siamese formation for gate recognition research.

Graduate Thesis 07/2018 – 01/2019
Southampton University, United Kingdom

Using AI to remove aliasing and moiré from point cloud render videos. Used a convolutional recurrent autoencoder.

Computer vision project 07/2018 – 01/2019
Southampton University, United Kingdom

15 class scene recognition. Achieved 3rd highest accuracy in a class of 300 students. Used ResNet50 together with an SVM.

Computational biology 01/2018 – 07/2018
Southampton University, United Kingdom

Secondary protein structure prediction using an LSTM. Achieved close to state-of-the-art performance.

Thesis 10/2017 – 07/2018
Southampton University, United Kingdom

Computer vision system to detect people carrying weapons. Using Keras, Tensorflow and Python while building a custom synthetic dataset by modding a game in C#.

Education

Exchange Student 01/2019 – 07/2019
National University of Singapore, Singapore

Key Modules: Advanced topics in machine learning, Knowledge discovery methods in bioinformatics, neural networks, digital entrepreneurship.

MEng (1st Class Hons) 09/2015 – 07/2019
Electronic engineering with AI
Southampton University, United Kingdom

Key Modules: Computer Vision, Evolution of complexity, Advanced programming, Machine Learning, Computational Biology, Computer Engineering, Control & Communications, Secure Systems.

University's entrepreneurial activities

- Co-organised and co-run 5 speaker events and 2 workshops throughout the year 16/17.
- Scouted and fast-forwarded through an incubator 3 teams, one of which went on and won £25k from 3 investors in 2017.
- Pitched a start-up together with two all-star in 2016
- Pitched another start-up in 2016 and won £3k.

Skills

Computer science

Data science, Numpy, Scikit-learn, Pandas, Keras, Pytorch, Matplotlib, Deep learning, Computer Vision, OpenCV, Machine learning, HTML, CSS, JavaScript, C, C++, Anaconda

Languages

English & Italian

Native

Hackathons

Attended 8, Finalist in 3.

F10 hackathon 15/09/2019
Pwc headquarters, Singapore

Developed with a multicultural team an AI tool to aid corporate action decision making. It uses stock exchange data and random forest decision trees.

Yity online hackathon 20/02/2019
Singapore

Object detection task on pedestrian/cars, my model achieved the 10th highest accuracy in the whole of Singapore, **won \$300.**