Laura Hanu

CONTACT

London, UK

+44 (0)7835244687

laura.hanu10@gmail.com

github.com/laurahanu

TECHNICAL SKILLS

Programming: Python, Matlab, C++, Git

Deep learning & data science libraries: Tensorflow, Keras, Pytorch, Theano, Open-CV, Scikit-learn, Scipy, Numpy

Machine learning: Computer Vision, Classification, Clustering, Object Detection, Image Segmentation, Unsupervised learning, Generative Networks, database management, cloud deployment (Azure, Kubernetes)

Image Processing: DICOM, morphological transforms, 3D design and visualisation software (Rhinoceros, Paraview, Meshlab and Cura)

ADDITIONAL SKILLS

Public Speaking (e.g. London AI, UCL Data Science), 3D printing, GCSE English & Maths Tutor (volunteering)

INTERESTS

AI creativity & imagination, Neurotechnology, AI safety & Effective Altruism

REFERENCES

References available upon request

RELEVANT EXPERIENCE

Data Scientist 12/2017 - present

Visulytix, London, UK

- Building & implementing state-of-the-art deep learning models for 3D retinal imagery, including GANs for classification for scarce data, segmentation and object detection
- Model speed optimisation for CPU deployment
- Development of internal data science tools for model pre-processing & post-processing in Python

Research project 06/2017 - 09/2017

Imperial College London

- DICOM data cleaning, exploring unsupervised networks & developing 3 types of network architectures for 3D MRI images
- Trained a 2D and 3D autoencoder to learn deep representations of the MRI data (code and example here)
- Trained a WGAN-GP network and generated new realistic examples (code and example here)

Research Assistant 06/2016 – 09/2016

King's College London

- Designed a 3D network of fractal trees in C++ for Magnetic Resonance Elastography experiments to model arterial branching
- 3D-printed phantom in preparation for MRI experiments
- Data analysis to prove power-law relationship between phantom fractal dimension and shear wave scattering

EDUCATION

MSc Bioengineering with Neurotechnology 2016 - 2017

Imperial College London

- Research Thesis: "Training unsupervised deep learning algorithms on 2D and 3D medical data"
- Development and application of a Convolutional AutoEncoder and 2 types of GAN architectures, DCGAN and WGAN, on MRI images
- Relevant modules: Machine Learning and Neural Computation, Computational Neuroscience, Introduction to Robotics, Biomedical imaging

BEng Biomedical Engineering 2013 - 2016

King's College London

- Research project: "Inferring micro-structural information from macroscopic elastic parameters determined from shear wave scattering in fractal-like media", received highest mark 84%
- Vice-President of The Engineering Society & Student ambassador

Mihai Viteazul Maths & Informatics National College 2009 - 2013

- National Baccalaureate Diploma: 97.3% Overall, including Mathematics (96.5%) and Physics (95.5%), top 8% of entire year