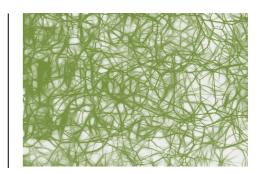
University of Bristol – Department of Computer Science COMSM0018 (2019-20)

Applied Deep Learning Symposium

You are welcome to attend the Applied Deep Learning symposium, with talks from our MEng students on a "deep learning" topic of their choice.

Format: Talks are 5 mins long and topic sessions are 20-40 minutes long. Dates and locations below



Day 1 - Monday 2nd of Dec [QB.F101]

Session: Generative and Adversarial 1

2/12/19 11:00 Daniel Scott Deep Dream Joseph Arneil Style Transfer

Jonathan Carpenter Using GANs for image synthesis

Joseph Mills Using deep learning to generate human motion

Jorge Sanchez-Cano Deep Fakes; DeepFake detection

BREAK

Session: Generative and Adversarial 2

2/12/19 11:30 Linh Pham Image colourisation with deep learning

> Sam Sutherland-Dee Video-to-Video Synthesis

Sibela Chinareva Self-Attention generative adversarial network

Mark Nicholl Fooling systems trained with DNNs Deep learning for pixel-level image fusion

Adam Sadiq

BREAK

Session: Medical and Biologically Inspired 1

2/12/19 12:00 Alfred Brown Biologically plausible backpropogation in neuronal dendritic behaviour

> **Daniel Davies** Using deep learning to monitor the status of endangered wildlife

Deep Learning for materials science Rachel Kirby Callum Fawcett Deep learning for new drug discovery

BREAK

Session: Language and Speech

2/12/19 12:25 Jay Lees Siri: On-device deep-learning guided text-to-speech system

> Konstantina Psoma Deep learning for conversational AI/Chatbots

Ben Hermans CNNs for text classification Adam Fox Voice cloning with deep learning Palvi Shah **Neural Machine Translation**

Miklos Borsi Deep learning in sentiment analysis and logical analysis

BREAK

Session: Vision 1

2/12/19 13:00 Yi-Ching Chen **Automatic Image Captioning**

> Ben Fossett One-Shot Learning with Siamese Networks Harry Stevens Deep SentiBank for visual sentiment analysis Tim Roderick Deep learning for event detection in sport

BREAK

Session: Vision 2

2/12/19 13:25 Ali Unla **Temporal Convolutional Networks**

> Faizaan Sakib Spatial-Temporal graph convolutional networks for skeleton action

> > recognition

Ashwinder Khurana Deep learning for footbal event detection

Using deep learning to understand patterns of player movement in Will Leeney

basketball

Day 2 - Friday 6th of Dec [QB.1.68]

Session: Hardware, Software and Theory

06/12/19 12:00 Robert Sparks Interpretability in deep learning, visualising image classifiers

Chetan Mistry How do O/S's affect learning

Thomas Alldridge Deep learning on Neuromorphic Hardware

Kheeran Naidu Weight initialising using Kaiming

Adam Pluck Representation of DNNs as gaussian processes

Kipp McAdam Freud Source separation with deep learning

BREAK

Session: Medical and Biologically inspired 2

06/12/19 12:35 David Sharp Biologically inspired deep learning

Ayshe Kuran Using CNNs for brain tumour segmentation

Day 3 - Monday 9nd of Dec [QB.F101]

Session: Medical and Biologically Inspired 3

9/12/19 11:00 Dominic Rawlins Detecting congestive heart failure from heartbeats

Andra Popa CapsNET for medical images

Aaron Wray A deep learning approach to diagnosing Parkinson's disease

Tristen Warren Deep neuro evolution

BREAK

Session: Medical and Biologically Inspired 4

9/12/19 11:25 Lucian Carp Deep learning: Depression diagnosis

Sam James Medical imaging analysis using deep learning

Katie Marquand Deep learning techniques for brain-computer interfaces

Hayden Isaac Deep learning in cellular biology

BREAK

Session: Music, Games and Graphics

9/12/19 11:45 Jack Jones OpenAl Five

Rudy Hagemichael Using CNNs to denoise monte carlo rendering

Kenneth Lomas EdgeConv:Dynamic Graph CNN
Xingyang Zhou Using Deep learning in game Al

Lewis Bell Item-based collaborative filtering for music using generalised deep semantic

embeddings

Nuha Tumia Building the bridge between deep learning and the fashion industry

Leechay Moran-Allen Deep neural networks for YouTube recommendations

BREAK

Session: Deep learning for Control

9/12/19 12:30 Angus Williams Applications and Implementation of Deep Learning in Swarm Intelligence

Roman Bromidge Phase functioned neural networks for character control Farrel Zulkarnaen Guided deep reinforcement learning for swarm systems

Stoil Ganev World models

Dafydd Broom Deep NN to predict taxi trip destination

BREAK

Session: Finance & Security

9/12/19 13:00 Ben Lee Deep learning and sentiment analysis focus: finance

Will Smith Time series prediction/automated traders

Marco Lewis Deep learning and cryptography

Andra Vasilcoiu

Deep learning and momentum investing

Jake Farren-Price

Deep learning with predictability in betting

Nashe Mncube

Formally verifying deep neural networks