Dr. Gregory Palmer

Curriculum vitae

Personal Statement

I am currently working as a postdoctoral researcher in the Leibniz University Hannover's L3S Research Center. My research interests include reinforcement learning, federated learning and generative models. My work focuses on improving the accessible to AI solutions for small and medium-sized enterprises through the Intelligent Industrial Production (IIP) Ecosphere project [1]. Within this project I am the project manager for L3S, and also lead the Think Tank Data (TT-Data). Our work within TT-Data focuses on the development of novel methodologies for valuating data, addressing privacy concerns, and facilitating the sharing of data, in particular via Federated Learning.

Education

October 2016 – December 2019
PhD Student
University of Liverpool

September 2013 – June 2016
B.Sc. (Artificial Intelligence) Hons.
University of Liverpool
First-Class Honours.

September 2004 – June 2007
B.Sc. (Psychology) Hons.
Greenwich University
Upper Second Class Honours.

September 2000 – July 2002
BTEC ND in Computing.
Sutton Coldfield College of Further Education
All subjects passed with "Distinction".

Program Committee Member

- Autonomous Agent and Multi-Agent Systems
- European Conference on Artificial Intelligence,
- International Joint Conferences on AI,
- Neural Information Processing Systems.

Reviewing

- Journal of Autonomous Agents and Multi-Agent Systems,
- Artificial Intelligence,
- Ambient Intelligence Humanized Computing,
- Transactions in GIS.

[1] https://www.iip-ecosphere.eu/

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ϟ https://gjp1203.github.io/

Relevant Employment

August 2020 – Present
L3S Research Center
Leibniz Universität Hannover
Postdoctorial Researcher
Hannover, Germany

February 2019 – July 2020
Geographical Data Science Lab
University of Liverpool
Research Fellow
Liverpool, United Kingdom

Publications

Gregory Palmer, Karl Tuyls, Daan Bloembergen, and Rahul Savani. Lenient Multi-Agent Deep Reinforcement Learning. In *Proc. of **AAMAS***, pages 443–451, 2018

Gregory Palmer, Rahul Savani, and Karl Tuyls. Negative update intervals in deep multi-agent reinforcement learning. In *Proc. of **AAMAS***, pages 43–51, 2019

Benjamin Schnieders, Shan Luo, Gregory Palmer, and Karl Tuyls. Fully convolutional one-shot object segmentation for industrial robotics. In *Proc. of **AAMAS***, pages 1161–1169, 2019

Gregory Palmer, Benjamin Schnieders, Rahul Savani, Karl Tuyls, Joscha-David Fossel, and Harry Flore. The Automated Inspection of Opaque Liquid Vaccines. In *Proc. of **ECAI***, pages 1898–1905, 2020

Alessia Calafiore, Gregory Palmer, Sam Comber, Daniel Arribas-Bel, and Alex Singleton. A geographic data science framework for the functional and contextual analysis of human dynamics within global cities. ***Computers, Environment and Urban Systems***, 85:101539, 2020

Gregory Palmer, Mark Green, Emma Boyland, Yales Stefano Rios Vasconcelos, Rahul Savani, and Alex Singleton. A deep learning approach to identify unhealthy advertisements in street view images. ***Scientific reports***, 11(1):1–12, 2021

Lecturing

2018/19 - Semester 2

MSc COMP532
Machine Learning and BioInspired Optimisation
University of Liverpool
Guest lecture on the subject of evolutionary game theory and cooperative multi-agent reinforcement learning.

Teaching

Throughout my PhD at the University of Liverpool I worked as a tutor (T) or lab assistant (LA) on the following modules:

2018/19 - Semester 1
COMP305 – Biocomputation (T)
COMP211 – Computer Networks (LA)

2017/18 - Semester 2
COMP122 – Object-Orientated Programming (LA)
COMP282 – Adv. OO C Languages (LA)

2017/18 - Semester 1
COMP305 – Biocomputation (T)
COMP219 – Artificial Intelligence (LA)

2016/17 - Semester 2
COMP222 – Game Design & Implementation (LA)
COMP282 – Adv. OO C Languages (LA)

Outreach

Oct 2016 – Feb 2019
As a member of the University of Liverpool's Computer Science department's outreach team I was responsible for running an encryption and code breaking and other activities during school visits. Later I developed a mini *Reinforcement Learning* (RL) lecture. The lecture included a basic intro regarding the training of RL agents, and raised awareness of breakthroughs in this area, including mastery of computer games, applications in robotics and Google Deepmind's Alpha GO. Throughout the session the audience was given opportunities to fine tune and optimise their own RL agents within a competitive setting.

Skills

Most Relevant: Python, TensorFlow, Torch, Matlab, C++, C, MySQL, UNIX, VIM, TMUX, Jupyter Notebook, Pandas, Seaborn, Matplotlib, OpenCV, LaTeX, OpenSpiel, Stable-Baselines

Other: Java, Objective C, PHP, JavaScript, Prolog, QT Creator, Eclipse, XCode, Visual Studio, Arduino, HTML, CSS, XAMPP, Git, XML, Ajax, JMonkeyEngine, VBA, Assembly, JQuery

Workshops

June 2021, November 2021
IIP Open Core – Forum KI in der Produktion
Organizer of workshop series for TT-Data [2]

April 2021
Daten in der Produktion – Datenqualität, Zertifizierung und Haftung
Presenter: Wie wertvoll sind meine Daten? Den Datenwert für Machine Learning messen

March 2021
Reinforcement Learning Study with the Alan Turing Institute
Co-organizer for a three week data study group on the topic of adversarial reinforcement learning with partially observable domains [3].

Awards

2016 BCS Merseyside Prize for the best Computer Science student
University of Liverpool

2015 O'Reilly Academic Prize
University of Liverpool

2002 Exceptional Effort and Progress Award
Sutton Coldfield College

Mentoring

Since May 2021

Novo AI UG
Lange Laube 6, 30159
Hannover, Germany
https://novoai.de

Communication skills

Native speaker English, German

References

Line Manager
Dr. Claudia Nideree
L3S Research Center
Leibniz University Hannover
E-mail: niederee@l3s.de

PhD Supervisors
Karl Tuyls, Prof. Computer Science
Google DeepMind
E-mail: karltuyls@google.com

Rahul Savani, Prof. Computer Science
University of Liverpool
E-mail: rahul.savani@liverpool.ac.uk

[2] https://www.iip-ecosphere.de/event/open-core-vol-2/
[3] https://www.turing.ac.uk/research/publications/reinforcement-learning-study-group-report-february-2021