Christopher W. F. Parsonson

🎓 scholar.google.com/citations?user=2Vw7d64AAAAJ&hl 🛛 🔀 cwfparsonson@gmail.com

SUMMARY

5+ years experience in ML/AI/networking research and development. Proven success developing state-of-the-art algorithms, open-sourcing high-quality research code, and publishing, reviewing, and winning awards in top outlets such as AAAI, NeurIPS, ICML, JLT, and OFC. Demonstrated ability to apply AI/ML solutions to real-world problems.

TECHNICAL SKILLS

Python, MATLAB, PyTorch, TensorFlow, DGL, PyTorch Geometric, W&B, Hydra, TensorBoard, Ray, RLlib, Gym, Pandas, NumPy, SciPy, Scikit-learn, PySCIPOpt, CVXPY, PuLP, Jupyter, Neovim, VSCode, Git, Linux, tmux, Sphinx, Docker, &TeX

EDUCATION

University College London (UCL), PhD	2019 — Present
<i>Thesis: 'Computer Network Optimisation with Artificial Intelligence and Optics', EEE Dept., Optical Net</i> • Authored 10+ publications in leading AI/ML and networking outlets (AAAI, OFC, JLT, etc.)	works Group
- ICML outstanding reviewer award (top 10%), NeurIPS reviewer, UCL 3MT competition winner	
Developed state-of-the-art reinforcement learning/graph neural network/swarm/evolutionary algorithms and the state-of-the-art reinforcement learning/graph neural network/swarm/evolutionary algorithms are state-of-the-art reinforcement learning/graph neural network/swarm/evolutionary are state-of-the-art reinforcement learning/graph neural network/swarm/evolutionary are state-of-	rithms
Deployed open source software package for custom reproducible network traffic generation	
University of Cambridge (Gonville & Caius College), MRes	2018 — 2019
 Integrated Photonic & Electronic Systems Engineering, Distinction Projects in (1) 3D computational holography for VR & AR displays (2) signal optimisation with swarm Imperial College London, MEng 	n algorithms 2014 — 2018
 Materials Science and Engineering, First-Class Honours Top 5% of class (out of 120 students), awarded Morgan Advanced Ceramics prize for academic excel 	lence
Experience	
Visiting Researcher, The Alan Turing Institute, London	2022
• Created graph neural network and reinforcement learning algorithm for partitioning distributed dee	ep learning jobs,
achieving $\sim 60\%$ higher cluster throughput than prior state-of-the-art. Paper under peer review	
Research Scientist Intern, InstaDeep Ltd., London	2021 — 2022
• Developed graph neural network and reinforcement learning algorithm to solve NP-hard mixed inte	ger linear
programming problems $3-5 \times$ faster than prior work, enabling practical application at scale	•
One paper published in AAAI'23, one under peer review	
Venture Scientist, ConceptionX Deep Tech Startup Programme, UK	2021 — 2022
• Explored commercial potential of deep geometric learning in logistics and information security don	nains
• One of 16 teams selected (from $70+$ initial groups) to pitch to $400+$ investors and industry leaders a	it demo day
Lecturer & Teaching Assistant, UCL & UCL-Consultants, London	2019 — 2022
• AI Masterclass for DSTL, Machine Learning MSc, Applied Machine Learning Systems, Programming & Cloud Data Centres & Edge Computing, Python Programming, Mathematical Modelling & Analysis	Control Systems,
• Leadership roles included: Lecturing, examining, tutorial demonstrations & supervisions, course & e	exam design
Research Engineer Intern, VividQ Ltd., Cambridge	2018 — 2019
- Proposed and deployed method to expand 3D display size by $2 imes$ without compromising quality	
Research Engineer Intern, Dyson Ltd., Bristol	2017
Worked in thermodynamics research team. Conceptualised and demonstrated method to increase	heat sink
efficiency by 50% . Allocated $\$20$ k budget to set up and manage new suppliers and contracted resea	rchers
Participated in 2017 Hackathon, taking third place	
Finalist, Engineers Without Borders Challenge, UK	2017
Competitive 20-week national competition to develop engineering solutions for Bambui, Cameroor	า
- Won entry out of $4,600+$ applicants to finals where presented to $200+$ engineers and 18 judges	
• Finished 3^{rd} , placing in top 0.1% of applicants	
Internships at Cambridge Nanosystems, Polygelco, and Ubisense	Pre-2017