

**Olga Moskvayak**

Machine Learning Engineer, Computer Science PhD Researcher

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CV

Summary



I am a Computer Science PhD Researcher at QUT Centre for Robotics, Australia. My research is in the field of computer vision with the focus on deep learning with limited annotated data. I am passionate applying machine learning for real-life applications. My research has been used to build and deploy deep neural networks for applications in wildlife conservation.

Work experience

- Sep 2020 – present: ML Engineer, contractor

WildMe/Wildbook, Portland, Oregon, USA

Achievements:

- Implemented and delivered AI models for wildlife detection and identification
- Integrated the solution as a plugin to existing infrastructure

Technologies: PyTorch, OpenCV, open source GitHub

Source code: [orientation network](#), [re-identification network](#)

- Jul 2018 – Nov 2019: Tutor (Advanced AI course)

Queensland University of Technology, Brisbane, Australia

Duties included:

- prepared course materials and assignments
- presented lectures and tutorials on building AI models
- marking assignments and exams

- Oct 2016 – Sep 2017: Research Assistant, part time

Central Queensland University, Brisbane, Australia

Achievements:

- implemented the multi-objective optimisation algorithm and the genetic algorithm in Java for the problem of generating a nutritionally balanced diet.
- delivered a prototype of a smart dietary system that generates daily meals schedules based on dietary requirements.
- Jun 2009 - May 2014: SAP ERP Consultant, full time

Several consulting companies based in Moscow, Russia

Achievements:

- analysed and designed business processes in logistics for clients in energy and gas mining industries,
- customised SAP system to tailor for business requirements,
- prepared project documentation,
- liaised with stakeholders and key end-users.

Education

- Ph.D in Computer Science, Queensland University of Technology, Australia, 2021 (expected)
- M.S. in Information Systems, Central Queensland University, Australia, 2016
- B.S. in Mathematics, Lomonosov Moscow State University, Russia, 2009

Skills

- Research skills:
 - designing and building AI models for computer vision tasks;
 - contribution to research submissions in top AI conferences;
 - writing research papers and technical reports.
- Technical skills:
 - proficiency in Python including Pytorch, Keras, OpenCV, SciPy, Numpy, Pandas;
 - deployment of AI models and web applications (AWS, MS Azure, Docker).
 - practical experience in building, deploying and testing ML models in a product development context using software engineering best practices;
- Soft skills:
 - communication with non-technical stakeholders;
 - presentation skills.

Publications

- [Learning geometric equivalence between patterns using embedding neural networks](#)

Olga Moskvayak & Frederic Maire (2017). "Learning geometric equivalence between patterns using embedding neural networks." *In Proc. International Conference on Digital Image Computing: Techniques and Applications (DICTA)*.

- [Robust re-identification of manta rays from natural markings by learning pose invariant embeddings](#)

Olga Moskvayak, Frederic Maire, Asia O Armstrong, Feras Dayoub & Mahsa Baktashmotlagh (2021). "Robust re-identification of manta rays from natural markings by learning pose invariant embeddings." *arXiv preprint arXiv:1902.10847*.

- [Learning Landmark Guided Embeddings for Animal Re-identification](#)

Olga Moskvayak, Frederic Maire, Feras Dayoub and Mahsa Baktashmotlagh. (2020). "Learning Landmark Guided Embeddings for Animal Re-identification." *In Proc. Winter Conference on Applications of Computer Vision Workshops*. 1(1).

- [Keypoint-aligned embeddings for image retrieval and re-identification](#)

Olga Moskvayak, Frederic Maire, Feras Dayoub, Mahsa Baktashmotlagh. (2021). "Keypoint-aligned embeddings for image retrieval and re-identification." *In Proc. Winter Conference on Applications of Computer Vision (WACV)*. pp. 676-685.

- [Semi-supervised keypoint localization](#)

Olga Moskvayak, Frederic Maire, Feras Dayoub & Mahsa Baktashmotlagh (2021). "Semi-supervised keypoint localization." *In Proc. International Conference on Learning Representations (ICLR)*.