

MARCIN BOGDANSKI

DEEP LEARNING ENGINEER

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ABOUT ME

- I am **passionate about Artificial Intelligence**, especially Reinforcement Learning and related technologies. I completed my degree in 2007 with focus on AI. Due to pre-2012 AI winter, I pursued career in robotics.
- I have **2 years** of **deep learning** experience in commercial projects, most of which are vision and robotics related. In addition to this I have completed multitude of personal and learning projects.
- With **10+ years** in **software engineering** for experimental mobile robots, I am looking to advance my career into **deep learning research** and to apply my knowledge to build solutions to real-world problems.
- In my career, I was exposed to all aspects of high-tech R&D projects giving me unique appreciation to technical, human and business factors while successfully delivering work to customers.

KEY SKILLS AND ABILITIES

MACHINE LEARNING	neural networks (ConvNets, LSTM, DQN, GANs) evolutionary algorithms (academic publications)	<div><div></div><div></div><div></div><div></div><div></div></div>
FRAMEWORKS	TensorFlow, Keras, PyTorch Amazon AWS, Google Cloud	<div><div></div><div></div><div></div><div></div><div></div></div>
PROGRAMMING	Python (numpy, sklearn, pandas, matplotlib) C/C++ (embedded, Qt), C# .NET (Unity3D), many other	<div><div></div><div></div><div></div><div></div><div></div></div>
RESEARCH	literature review, hypothesis testing, writing papers	<div><div></div><div></div><div></div><div></div><div></div></div>
MATHEMATICS	linear algebra, multivariable calculus, modeling, probability	<div><div></div><div></div><div></div><div></div><div></div></div>
ROBOTICS	signal processing, navigation, control systems, swarm AI	<div><div></div><div></div><div></div><div></div><div></div></div>
SOFT SKILLS	customer liaison, project management	<div><div></div><div></div><div></div><div></div><div></div></div>

PERSONAL PROJECTS

- Replicated pivotal Deep Mind 2013 Atari Paper (no official code, most hyperparameters unpublished)
- **Keras / PyTorch** implementations of:
 - ResNet50, Seq2Seq, DCGAN, FCN-8s
 - CNN→LSTM (image captioning)
- **Numpy from-scratch** implementations of:
 - MLP, Convolutions, RNN, LSTM, Embeddings

COURSES

- Udacity **Computer Vision Nanodegree**, 2019
- Udacity **NLP Nanodegree**, 2018
- Andrew Ng **Deep Learning Specialization**, 2018
- Udacity Deep Learning Nanodegree, 2017

ACADEMIC

Research Assistant Univ. of Bielsko-Biala (2010-2011)

- Co-authored multiple papers on applications of evolutionary algorithms to server task scheduling

BSc Computer Science Univ. of Bielsko-Biala (2004-2007)

- First-class honours.

COMMERCIAL

DEEP LEARNING ENG. Consulting (2017 - present)

- Commercial deep learning projects (paid work):
 - Introduced **vision system** for **tooling wear assessment** for a major aerospace manufacturer
 - Implemented **face detection** and **recognition** for family journal iPhone/Mac app.

TECHNICAL DIRECTOR DroneX Ltd (2014 - present)

- Implemented real-time **image segmentation** for obstacle avoidance in prototype ground robot
- Implemented **swarm AI** coordinating **200+ robots** in simulation (mining industry, US customer)
- Lead the team of engineers to design and build hardware and software for many drone projects
- Delivered all projects to full customer satisfaction (some projects resulted in patents)

TEAM LEADER Go Science Ltd (2011 - 2014)

- Responsible for multiple software and hardware systems integration on a deep-water vehicle.
- Lead the team of engineers to deliver multiple successful customer facing trials.

SOFTWARE ENGINEER Imagination Tech. (2008 - 2009)

- Built parts of Win7 GPU driver in C++ and Python