

# DAWID LASZUK, Ph.D.

[laszukdawid.com](http://laszukdawid.com)  
[github.com/laszukdawid](https://github.com/laszukdawid)  
[linkedin.com/in/laszukdawid](https://linkedin.com/in/laszukdawid)

[contact@dawid.lasz.uk](mailto:contact@dawid.lasz.uk)  
+1 778 706 6550

*Passionate about learning. Dedicated to constantly improve.*

## WORK EXPERIENCE

- Agents Bar*      *Since 03/2021*      Solo founder, All hats  
Agents Bar provides deep reinforcement learning agents as a service. Management is through APIs with web console interface or provided Python library. Users can create and start training dozens of agents within seconds. Common API definition allows onboarding custom agents and environments.  
[www.agents.bar](http://www.agents.bar)
- Amazon*      *06/2017 – 09/2020*      Software developer engineer  
*05/2020 – 09/2020* EconTech team. Development lead in productionalizing a reinforcement learning component as a part of service. Close collaboration with scientists. Setting and enforcing guidelines on machine learning systems' quality gates.  
*06/2018 – 05/2020* Yard and Gate Tech team. Contributing to many highly scalable AWS-native services through the design and development. Lead implementation of container based services. Go-to person for analytical approaches. Worked with geospatial data and workforce management. Led the business metrics pipelines development, event detection systems and demand forecasting.  
*06/2017 – 06/2018* North American Retail Expansion team. Away team model with many various-length projects. Led project requiring setting up org's data warehouse and a machine learning pipeline processing over 1 petabytes of data.
- Evertz  
Microsystems*      *01/2016 – 12/2016*      Software developer  
Agile development using Jira with software in both SVN and Git version controls. Although the main responsibility was to program back-end in Java, work often involved scripting with Python, front-end development in JavaScript and ActionScript 3, and maintaining Oracle and MariaDB databases.
- BrainTech*      *2012–2013*      Intern, Data analyst  
Designing and developing algorithms for data analysis and visualisation, mainly brain and muscles signals. Part of a few projects, including an open source Brain-Computer Interface platform ([OpenBCI](#)) and a real-time data visualization tool ([Svarog](#)).  
Reference: Prof. Piotr DURKA · [www.braintech.pl](http://www.braintech.pl)
- Titanis*      *2010–2012*      Python programmer  
Designing and developing a framework for different projects held within the company. Implementing algorithms for data processing and maintaining correct data streamline within projects.  
Reference: MATEUSZ KRUSZYŃSKI · [www.titanis.pl](http://www.titanis.pl)
- University of  
Warsaw*      *2009–2012*      Freelance programmer  
Work on developing Brain-Computer Interfaces. Implementing signal processing methods in Python & Matlab, and GUIs in Qt (C++). Occasionally updating hardware drivers (C) and Linux integration.  
Reference: Prof. PIOTR DURKA

Contact details to referees and supervisors available upon request.

## TECH EXPERIENCE

### Software Development

Languages: Python, JavaScript, TypeScript, Java, SQL, NoSQL  
Common modules: PyTorch, NumPy, SciPy, Matplotlib, scikit-learn, Spark, Vue, React.  
Technology: Containers (AWS ECS/EKS, Docker, Docker), ETL (MongoDB, AWS Glue, AWS Athena, EMR), Databases (MongoDB, Redshift, DynamoDB, S3), Cloud providers (AWS, DO), Analytic (SageMaker, Rekognition)

### Machine Learning

Deep reinforcement learning, deep learning, clustering, regression analysis, Naive Bayes, optimisation methods, Markov Chain Monte Carlo.

### Data analysis

Dynamical systems, differential equations, time-frequency analysis, IIR & FIR filters, data decomposition, components extraction, mathematical modelling, Bayesian statistics.

## EDUCATION

2012 – Nov 2016\*

University of Reading

### PhD in Cybernetics

School of Systems Engineering · Brain Embodiment Laboratory  
Thesis title: *KurSL: a model of coupled oscillators based on Kuramoto's coupling and Strum-Liouville theory*  
The model explains a general system of mutually interacting components with periodic states. Its described in terms of coupled differential equations and fit combining Bayesian statistics and Monte Carlo Markov Chain (MCMC). Except for MCMC, all code was written from scratch. Supervised by Prof. SŁAWOMIR NASUTO & Dr. OSWALDO CADENAS.

\*Thesis submitted Nov 2016, defended Apr 2017, corrected Mar 2018.

2011 – 2012

University of Warsaw

### MSc in Physics (pl: magister)

Overall result: 4.88/5.00 (top 5%) · *Biomedical Specialisation* · Two years curriculum finished within one year

Thesis title: *Analysis of experimental data for the hybrid BCI systems.*

Combined an open sourced eye tracking device with a previously implemented BCI paradigm to create a gradually transitioning assistive technology. The project required assembling device, updating OpenBCI platform for the integration and data analysis.

Supervised by Dr. RAFAŁ KUŚ.

2008 – 2011

University of Warsaw

### BSc in Physics (pl: licencjat)

Overall result: 4.76/5.00 (top 5%)

Thesis title: *Implementation of P300 paradigm in OpenBCI platform.*

Contributed to the OpenBCI platform by implementing the P300 brain-computer interface paradigm. All code, including UI and data processing, was written in Python. Supervised by Prof. PIOTR J. DURKA.

## AWARDS AND SCHOLARSHIPS

2012 – 2015

PhD studentship from the University of Reading.

2010/11

Polish Ministry of Science and Higher Education scholarship, which is a nation-wide scholarship based on overall academic achievements.

2010/11

2011/12

Structural Funds and Cohesion Fund scholarship titled "Physics — qualifying for education based economy". Granted to the best 20% students.

## OTHER INFORMATION

### Personality

Keen on learning. Ambitious. Enjoys being surrounded by determined and creative people. Curious. Constantly tinkering and trying to learn how everything works.