Dominika Długosz

CONTACT

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📍 Lisbon, Portugal

LANGUAGES

Language	Level
Polish	● ● ● ● ●
English	● ● ● ● ●
French	● ● ● ○ ○
German	● ● ○ ○ ○

PROGRAMMING LANGUAGES

Python
with:
- NumPy
- SciPy
- Scikit-learn
- TensorFlow
- matplotlib,
- pandas
- PyQt5

MATLAB

basics of: C++, Prolog, Lisp

SOFTWARE SKILLS

MS Office
LaTeX
Version control tools (Git)
Operational systems:
    Windows, Linux (CentOS)

EXPERIENCE

Double-Degree PhD Student

Instituto superior Técnico, University of Lisbon, Portugal & University of Granada, Spain
Sep 2025 - present

Research area: Deep Neural Network Architectures
for Explainable Dual-Process Computation

Scientific Programmer

Well ID AS, Stavanger/Trondheim, Norway
Aug 2023 - present

Analysis and visualisation of well logging data.
Development of a Python package for creating data files
in the DLIS standard.

Junior Fellow

CERN, Geneva, Switzerland
Nov 2020 - Apr 2023

Developing Python scripts for commissioning of the two largest accelerators - LHC and SPS - after Long Shutdown II.
Bunch profile analysis in the LHC, SPS, ELENA, and AD.
Creating user interfaces for hardware configuration and data acquisition.

Data Science Intern

DeepMiner, Aberdeen, Scotland, UK
Jun 2020 - Aug 2020

Developing a multi-modal deep learning system
for relevance assessment of customised web search results.
Industrial collaboration for writing a final dissertation
for MSc in Artificial Intelligence at the University of Aberdeen.

Demonstrator

University of Aberdeen, Scotland, UK
Sep 2019 - Apr 2020

Assisting in undergraduate Python programming tutorials.

Technical Student

CERN, Geneva, Switzerland
Sep 2018 - Aug 2019

Developing Python scripts for commissioning of LHC and SPS.
Analysis of LHC fill data across Run II (2015-2018).

PROJECTS

DLIS Writer

Well ID, Stavanger/Trondheim, Norway
Aug 2023 - Present

Creating an open-source Python package for writing data files in the DLIS format.

MiRNA normalisers for cancer research

Łódź University of Technology and Medical University of Łódź, Poland
Feb 2018 - Jul 2018

Analysis of miRNA data for early tumour diagnosis.

The North Sea Race Endurance Exercise Study

University of Stavanger, Norway
Jun 2016 - Feb 2018

Analysis of ECG, sports watches, and blood biomarker data collected from participants of the 2014 North Sea Race.

Interdisciplinary Design Thinking Project

Łódź University of Technology, Poland
Feb 2016 - Jun 2016

HOBBIES

Swing dancing
Hiking and paragliding
Knitting and crocheting
Music and singing

EDUCATION

MSc Artificial Intelligence

University of Aberdeen, Scotland, UK
Sep 2019 - Sep 2020
Dissertation:
Multi-Modal Deep Transfer Learning for Business Signals Detection in Social Media Communications.
Final mark: First Class Honours (Distinction).

BSc Biomedical Engineering

Łódź University of Technology, Poland
Sep 2014 - Feb 2018
Dissertation:
ECG Signal Analysis for Troponin Level Assessment and Coronary Artery Disease Detection.
Final mark: Excellent (First Class)

Erasmus+ International Exchange Semester

University of Twente, Netherlands
Feb 2017 - Jul 2017

AWARDS AND SCHOLARSHIPS

Project DIXcover research grant
awarded by INESC-ID, Lisbon, in relation to pursuing the PhD research

The Data Lab MSc 2019
Scholarship programme for MSc in Artificial Intelligence at the University of Aberdeen

II Award in Best Bachelor of Engineering Thesis
at the Faculty of Electrical, Electronic, Computer and Control Engineering, Łódź University of Technology, Poland (2018)

Best Paper Award
at the 4th Doctoral Symposium on Recent Advance in Information Technology (DS-RAIT'17), FedCSIS 2017, for the paper *The North Sea Bicycle Race ECG Project: Time-Domain Analysis*, Prague, Czech Republic (2017)

Łódź University of Technology Rector Scholarship
in academic years: 2015/16, 2016/17, and 2017/18

SCIENTIFIC PUBLICATIONS

- **Długosz, D.**, J. Egli, G. Hagmann, P. Baudrenghien, B. Bielawski, H. Timko, S. Novel Gonzalez, and A. Butterworth. "SPS & LHC setting-up tools using Python." (2022).
- Timko, H., Argyropoulos, T., Baudrenghien, P., Calaga, R., **Długosz, D.**, et al. (2019). LHC Longitudinal Beam Dynamics During Run II. In Proc. 9th Evian workshop, Evian, France.
- **Długosz, D.**, Królak, A., Eftestøl, T., , Ørn, S., Wiktorski, T., Oskal, K. R. J., Nygard, M. (2018, September). ECG Signal Analysis for Troponin Level Assessment and Coronary Artery Disease Detection: The NEEDED Study 2014. In 2018 Federated Conference on Computer Science and Information Systems (FedCSIS) (pp. 1065-1068). IEEE.
- **Długosz, D.**, Królak, A., Eftestøl, T. C., Ørn, S., Wiktorski, T. (2018, March). The North Sea Bicycle Race ECG Project: Time-Domain Analysis. In Journal of Automation, Mobile Robotics and Intelligent Systems (JAMRIS) No. 01, 2018 (pp. 23-32).