# Bartosz Piotrowski

Place of residence: Warsaw, Poland Webpage: http://bartosz.cc

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#### **Education**

PhD in Computer Science, defended at Radboud University Nijmegen Thesis: Synergy of Machine Learning and Automated Reasoning	2017 - 2023
Supervisors: Josef Urban, Mikoláš Janota, Herman Geuvers	
Research visit, Carnegie Mellon University	03.2022 - 09.2022
MSc in Philosophy, University of Warsaw	2014 - 2021
Student exchange, ILLC, University of Amsterdam	09.2016 - 02.2017
MSc in Mathematics, University of Warsaw	2014 - 2016
BSc in Mathematics, University of Warsaw	2011 - 2014

### **Employment**

Postdoctoral Researcher in IDEAS NCBR in Warsaw, Poland	09.2023 - now
Junior Research Scientist in Czech Institute of Informatics, Robotics and Cybernetics in Prague Accomplished tasks: Successfully applying machine learning and deep learning techniques to various automated reasoning tasks, like: premise selection, symbolic rewriting, tactic prediction	2017 - 2023
Internship in Interdisciplinary Centre for Mathematical and Computational Modelling, Warsaw Accomplished task: Developed machine learning software to analyze data from flow cytometry	2015 - 2016

#### Technical skills

- **Python** (extensive experience)
- Ocaml (intermediate experience)
- R (extensive experience)
- Basic tools: GNU/Linux, SQL, Git, Latex, Bash

### **Teaching experience**

- Artificial Intelligence in Theorem Proving
- Introduction to Functional Programming
- Probability Theory and Statistics
- Statistical Data Analysis

## **Selected publications**

- Machine-learned premise selection for Lean, with R. Fernández Mir & E. Ayers. TABLEAUX 2023
- Towards learning quantifier instantiation in SMT, with M. Janota & J. Piepenbroeck. SAT 2022
- ProofNet: A benchmark for autoformalizing and formally proving undergraduate-level mathematics problems, with Z. Azerbayev & J. Avigad. MATH-AI@NeurIPS 2022
- Stateful premise selection by recurrent neural networks, with J. Urban. LPAR 2020
- Can neural networks learn symbolic rewriting? with J. Urban, C. Brown & C. Kaliszyk. GNN@ICML 2019
- ATPboost: Learning premise selection in binary setting with ATP feedback, with J. Urban. IJCAR 2018

#### **Grants & awards**

- Research grant (28 000 EUR) from the National Science Centre in Poland for years 2019–2022
- Research visit (1 week) in University of Oxford, applying automated theorem proving techniques for databases
- Research visit (3 weeks) in University of Innsbruck, applying deep learning for automated theorem proving
- Finalist of the 62nd Polish National Mathematical Olympiad (April 2011)