# Eryk Warchulski

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## Education

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|---|---|
| 2015-2019 | **Bachelor**, *Warsaw University of Technology, Faculty of Electronics and Information Technology*, Warsaw - Poland, *Electronics*. |
| 2019-2020 | **Master of science**, *Warsaw University of Technology, Faculty of Electronics and Information Technology*, Warsaw - Poland, *Computer science*. |

## Experience

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|---|---|
| 06.2018-09.2018 | **Data Engineer, Internship**, *Poland's Ministry of Finance*, Warsaw. <br> Project focused on a social network analysis (`Python`, `R` and `Neo4j` graph database) |
| 02.2019-... | **Machine Learning Engineer**, *Warsaw University of Technology*, Warsaw. <br> I participate in science and research project which is focusing on the optimization of energy consumption of cooling system for external company. |
| 08.2019-01.2020 | **Data Scientist**, *Polskie Technologie Sp. z o. o., PLTE*, Warsaw. <br> I worked as a DS and a partial DevOps Engineer for fin-tech company which is focusing on fincial risk modelling. |

## Programming

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|---|---|
| **R** | full `Tidyverse` stack, `rlang`, `mlr/3`, `drake`, `RMarkdown`, `optim`, `caret`, R6 class system |
| **Python** | `Numpy`, `Tensorflow`, `Keras`, `Spade` |
| **Haskell** | `Stack`, `QuickCheck`, general notion of functional programming i.e functors, applicative, monads, etc. |
| **C** | System programming, `Posix` |
| **C++** | STL, generic programming, `C++11` |
| **Elixir** | beginner, learning in progress! |

## Technologies

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|---|---|
| **Database** | `SQL`, `SQLite`, `Neo4j`, `Redis` |
| **Docker** | `Docker Compose` |
| **git** | GitHub, GitLab and Bitbucket ecosystem i.e. Travis, GitLab CI/CD, Jira |
| **Unix/Linux** | advanced as a user and system administrator |
| **Literal programming** | `Jupyter ecosystem` |
| **Formal specification** | `Alloy` |
| **Methodoglies** | Scrum, Kanban |

## Publications

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|---|---|
| PPSN2018 | "Improving the Differential Evolution Strategy by coupling it with CMA-ES", Jaroslaw Arabas, Eryk Warchulski and Dariusz Jagodzinski |
| ELTE2019 | "Optimization of ultra-thin magnetron sputtered aluminium films", Robert Mroczynski, Jaroslaw Arabas, Eryk Warchulski |
| PPSN2020 | "Investigation of step-size adaptation methods for CMA-ES based on population midpoint fitness" |

## Engineering & science intrests

– Functional programming
– Optimization

– Nonparametric regression
– Evolutionary strategies

## Projects (on my GitHub!)

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|---|---|
| **R** | Modified regression random forest from scratch – modification concerns on selecting instances from dataset using kernel density estimate. |
| **R** | Tools for and analysis of unsupervised novelty detection methods. |
| **Python** | Convolutional neural network from scratch. |
| **Python** | Multiagent trade market simulator. |
| **C++** | Efficient generator of Barabasi-Albert random graphs. |
| **Haskell** | Pyramid puzzle solver. |

## Languages

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|---|---|---|
| Polish | Native | |
| English | Intermediate | *fluent reading and writing, good at verbal* |