

# Mateusz Gomulski

Data Scientist



## KEY FACTS

### Personal details

Mateusz Gomulski  
 22 February 1990  
 Warsaw

### Contact details

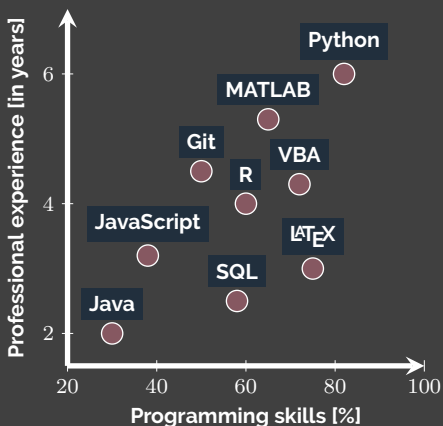
+48 -----  
 github.com/GML22  
 mateusz.gomulski@gmail.com  
 linkedin.com/in/mateusz-gomulski

### Areas of specialisation

# Programming   # Machine Learning  
 # Data Visualisation   # Risk Management

## SKILLS

### IT & programming



### Languages

Polish		Native speaker
English	C1	● ● ● ● ● ● ● ●
German	A2	● ● ● ● ● ●
Chinese	A1	● ● ● ● ●

## SHORT RESUME

- 2022–Present   **Senior Data Scientist in the Risk Office**  
PZU Group
- 2021–2022   **Risk Modelling Manager**  
Generali Investments TFI
- 2018–2021   **Data Scientist in the Risk Office**  
PZU Group
- 2014–2017   **Senior Risk Management Specialist**  
Generali Poland Group
- 2012   **Intern in the Individual Products Office**  
PZU Group

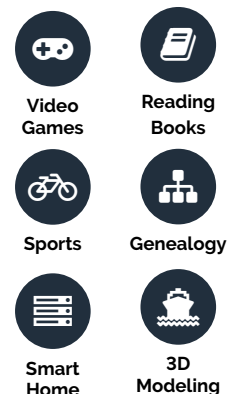
## EDUCATION

- 2019–2020   **Deep Neural Networks - Applications in Digital Media**  
Postgraduate studies · Graduation with honours  
Warsaw University of Technology
- 2015–2017   **Computer Engineering**  
Extramural engineering studies  
Warsaw University of Technology
- 2012–2015   **Computer Science and Econometrics**  
Full-time Master's degree studies  
University of Warsaw
- 2012–2015   **Computer Science**  
Full-time engineering studies  
Warsaw University of Technology
- 2009–2012   **Interdisciplinary Economic-Managerial Studies**  
Full-time undergraduate studies  
University of Warsaw

## COURSES & TRAININGS

- 2023 📍 Warsaw   SQL language in Oracle Databases
- 2022 📍 Warsaw   Advanced workshops on reviewing bond valuation models
- 2022 📍 Warsaw   Interest rate derivatives
- 2016 📍 Trieste   Statistical Learning and Data Analytics
- 2016 📍 Trieste   Accounting for Insurance Contracts and Financial Instruments
- 2016 📍 Milan   Solvency II Standard Formula Opening Meeting 2007
- 2015 📍 Trieste   EBS 2.0. - Internal model of Generali Group under Solvency II regime
- 2014 📍 Warsaw   SAS Data Mining Certificate Program

## HOBBIES



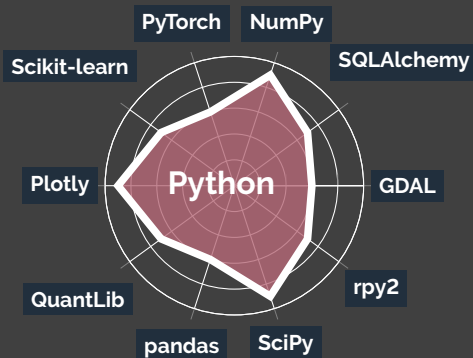
## ACHIEVEMENTS

- 2013   Winner of the contest for the best econometric model at the Faculty of Economic Sciences, University of Warsaw
- 2013   Finalist of the 9th edition of the Stock Exchange Academy of the Students' Research Circle: The Investors Club at the Warsaw School of Economics
- 2012   Finalist of the 9th edition of the Career Program by the Polish Business Roundtable

## STRENGTHS

creativity   leadership   critical thinking   task-motivated   open-minded

## Key Python libraries



## PORTFOLIO



### 1. [gh/GML22/GML-Net](#)

Convolutional Neural Network with U-Net architecture designed to solve the problem of building detection in RGB aerial imagery

### 2. [gh/GML22/PostCodesMaps](#)

Python application that creates postcode maps in Poland based on a set of address points from the Polish National Register of Boundaries Database

### 3. [gh/GML22/GeocoderPL](#)

Python application that can be used to geocode address points in Poland and display basic information about the building associated with a given address

### 4. [gh/GML22/Anti-Plag-Java](#)

Java application that detects plagiarism by comparing source codes of projects

### 5. [gh/GML22/Fed\\_QE\\_Model](#)

Econometric analysis of the effectiveness of unconventional monetary policy of the Federal Reserve during the economic crisis - analysis for the period of 2008-2016

### 6. [gh/GML22/Oscars\\_Model](#)

Econometric analysis of economic and non-economic factors affecting the probability of winning an Oscar

### 7. [gh/GML22/VBA\\_Interactive\\_Map](#)

Interactive map of Poland implemented in an Excel spreadsheet showing data on the population of Poland

## FULL RESUME

09.2023–Present **Senior Data Scientist in the Abakus II project** – **PZU Group**

- Technical leader of the emerging internal model, ensuring quality and consistency of implementation, proper documentation and versioning.
- Lead architect of the technical implementation of the project focusing on maintaining high standards of object-oriented parallel programming.
- Key developer of the simulation engine used to calculate premium risk within the project.
- Main author of the dependency modelling and reinsurance overlaying modules of the project.

06.2022–08.2023 **Senior Data Scientist in the Risk Office** – **PZU Group**

- Construction, maintenance and development of statistical, econometric and stochastic models used for calculation and reporting of market risk - mainly the Internal Market Risk Model.
- Construction, maintenance and development of tools supporting the calculation and visualisation of the flood risk in Poland, in particular the Internal Flood Risk Model and the Interactive Map of Flood Risk.
- Construction, maintenance and development of Internal Operational Risk Model used to calculate operational risk in the PZU Group.

12.2021–05.2022 **Risk Modelling Manager** – **Generali Investments TFI**

- Construction, maintenance and development of valuation models of financial instruments not quoted on active markets (in particular corporate bonds and derivatives) used in the process of daily valuation of all assets and for the purpose of monthly analyses carried out for the needs of the Valuation and Risk Committee.
- Construction, maintenance and development of risk management models used for measuring and monitoring market risk for the needs of the Valuation and Risk Committee.
- Construction, maintenance and development of financial models used for calculating reference rates for charging fees.

01.2018–11.2021 **Data Scientist in the Risk Office** – **PZU Group**

- Construction, maintenance and development of statistical, econometric and stochastic models used for calculation and reporting of market risk.
- Construction, maintenance and development of statistical model used for calculation of expected credit losses on debt securities, as required by the IFRS 9.
- Construction, maintenance and development of stochastic model used for the calculation of the maximum gross loss in a natural catastrophe scenarios.

06.2014–12.2017 **Senior Risk Management Specialist** – **Generali Poland Group**

- Quarterly and annual calculations of the solvency capital requirement in parts related to market risk, according to the standard formula and Generali Group internal model.
- Preparation of calculations and analyses for the needs of the Assets and Liabilities Committee and Risk Committee.
- Co-authoring the supervisory reports in the Solvency II regime: ORSA, QRT, RSR and SFCR - in the market risk sections.

06.2012–09.2012 **Intern in the Individual Products Office** – **PZU Group**

- Implementation of Excel VBA application to determine the indicators of fundamental and technical analysis of selected listed companies, indices, currencies and commodities for the purpose of constructing structured products in the PZU Group.

I agree to the processing of personal data provided in this document for realising the recruitment process pursuant to the Personal Data Protection Act of 10 May 2018 (Journal of Laws 2018, item 1000) and in agreement with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).