

Detail-oriented python developer and quantitative analyst. Experienced in software development for quantitative problems in several industries. **Agile methodologies fan. Team player.** Seeking to use proven coding skills, model development and problem solving skills to contribute to the design and implementation of the AI-based products.

Skills

Python Standard Library		Very Good
Python: NumPy, Pandas		Very Good
Python: SciPy, Matplotlib, Seaborn		Very Good
Object-oriented programming		Good
SQL (PostgreSQL)		Good
Jira, Confluence		Good
Git, GitLab		Good
Agile - Scrum		Good
Statistics, probability		Very Good
Quantitative finance models		Very Good

Work History

2022-08 - Current

Quantitative Analyst

Polskie Sieci Elektroenergetyczne S.A. (Transmission System Operator in Poland), remote: Cracow / office: Konstancin - Jeziorna

Designed and developed tools in **python**:

- For power system *must-run optimization* according to system limits using **gurobi** optimization solver.
- For analyzing energy consumption by companies aggregated by industries in order to analyze sensitivity of various recipients to changes in energy prices and crisis situations (e.g. COVID-19).

- For parsing and processing text data on individual power plant limits as a preprocessing *must-run optimization* tool.

2020-04 - 2022-07

Quantitative Analyst

Turbine Analytics S.A. / after takeover: ProService Finteco Sp. z o.o., remote: Cracow / office: Warsaw

Designed and prototyped **quantitative models for FinTech SaaS product** in the area of asset management and risk management: **prototyped** tools in **python**, developed model specifications and calculation test cases, models API tested (with **Postman** and **python**):

- Main original models: *Performance Attribution, Interest Rate Sensitivity for FI securities and derivatives, Passive Liquidity - Redemptions modelling.*
- **Calculation modules** for portfolio: *Return statistics, Sharpe ratio, Beta, Treynor, Maximum drawdown, Benchmark rate of return, Tracking error, Information ratio, Performance fees, Cashflow discounting etc.*

Turbine Analytics S.A. was acquired by ProService Finteco Sp. z o.o. in Jan 2022, Portfolio API team was disbanded within a few months

2018-10 - 2020-03

Coordinator of Models Development (Risk Modeling)

PZU S.A. / PZU Życie S.A., Warsaw

- Finalized Flood Risk Model development (with scientists from IMGW Institute) - spatial hydrological model based on *Extreme Value Theory* implemented in **MATLAB**: analyzed of model assumptions, methodological consistency of model, compare results with calculations replicated in a different environment.
- Analyzed combination of simulation results of Flood Risk Model with insurance exposure data to estimate catastrophic risk that is a component of *Internal Risk Model*.
- Collaborated on development of *Internal Risk Model* modules in area of market risk.
- Designed and implemented **MATLAB** tool automating processing of data from *Bloomberg Data License* system for tools in area of credit risk.

2015-04 - 2018-09

Junior Risk Specialist / Risk Specialist

Union Investment TFI S.A., Warsaw

Maintained and collaborated in development tools in **MATLAB**:

- For **risk measures calculation** in the following areas: *Global Exposure, VaR, Duration, Leverage, PnL Stress Testing, Liquidity Risk, Credit & Regional Risk, Currency Risk, Issuer Exposure.*
- For generating daily and weekly reports for above risk measures.
- For benchmark calculation and daily funds performance fees.
- For calculating market, credit and aggregated risk measures and scenarios within *EU PRIIPs* methodology.

Reporting & communication duties: reporting use of risk limits and communication with management board, asset managers; support for internal and external audits and for regulatory authority.

2014-07 - 2015-04

Junior Specialist for Real Estate Market Analytics

mBank Hipoteczny S.A., Warsaw

- Participation in statistical modeling of value of residential real estate.
- Preparing analyzes on real estate market.
- Participation in construction of housing price index.
- Transactional data quality management.

2012-10 - 2012-11

Teaching Practice in High School University Class

August Witkowski 5th High School, Cracow

- Classes of mathematics under the patronage of the *Institute of Mathematics of the Jagiellonian University*.
- In the form of 30 self-prepared and conducted lessons.

Foreign Languages

- **English:** Higher intermediate level (above B2)

Education

2007-10 - 2013-11

Master of Science: Mathematics

Jagiellonian University - Cracow

2004-09 - 2007-06

High School Diploma

August Witkowski 5th High School - Cracow
