



PRZEMYSŁAW BORUTA

Machine Learning Engineer

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Talk to my **personal chatbot** at <https://pboruta.pl>

STRENGTHS

💎 Passionate Learner

Driven to continuously expand knowledge and skills in machine learning and product development.

💎 Deep Learning Expert

Skilled in deep learning techniques and applications, with a focus on natural language processing and computer vision.

💎 MLOps Proficient

Experienced in deploying and managing machine learning models and processes using MLOps tools such as Airflow, Docker, and Kubernetes.

💎 Innovative Problem Solver

Successfully develops impactful solutions for document classification, chatbot models, anomaly detection, and sensitive data detection.

NOTABLE PROJECTS

Document Classification & Metadata Detection

Project for **document (scans) classification with data detection** (e.g. sender's data, data of the person to whom the document relates = about 25 data types) w/ asynchronous processing. Using both NLP and CV tools.

During first year of production deployment, the application processed **over 120,000 documents** with a classification efficiency of approximately 90% and saved hundreds of hours of human work.

SUMMARY

Enthusiastic ML Engineer with a proven background in finance and product development. Proficient in Deep Learning, NLP, and MLOps. Holds a degree in Quantitative Methods in Economics and Information Systems from SGH Warsaw School of Economics. Accomplishments include developing chatbot models for intent and named entity recognition, implementing document scans classification & data detection and other (check projects section). Experienced in leveraging LLMs to optimize intent recognition, streamline content creation, pinpoint customer buying intentions, and enhance sales assistance. A skilled coder who prioritizes code quality-versed in writing production code, not just tinkering in Jupyter Notebooks 😊 Fluent in Docker, Kubernetes, and CI/CD best practices. Excited about collaborating with a forward-thinking team to deliver impactful solutions. Ready to make significant enhancements to users' daily workflows and elevate customer experiences. Eager to contribute to your company's growth and innovation.

EXPERIENCE

Machine Learning Expert

02/2023 - Present

PKO Bank Polski

Warsaw, PL

- Independently lead **end-to-end ML project coordination**, overseeing all aspects from requirement gathering and analysis to technology selection, programming, and deployment in production environments. Successfully manage multiple projects, demonstrating proficiency in project management and the ability to meet deadlines effectively.
- Spearhead the **development of ML-based chatbots** for banking applications, taking charge of the entire development lifecycle. Ensure the continuous improvement of chatbot functionality by actively monitoring and enhancing their performance, with a focus on achieving high-quality intent recognition.
- Actively contribute to **problem-solving and decision-making processes**, utilizing analytical skills to address challenges and optimize project outcomes. Drive innovation by staying abreast of the latest advancements in machine learning and implementing cutting-edge technologies for improved project efficiency and effectiveness.

Sr. Machine Learning Specialist

01/2022 - 01/2023

PKO Bank Polski

Warsaw, PL

Sr. Product Development Specialist

04/2020 - 12/2021

ING Bank Śląski

Warsaw, PL

- Collaborated with a team to drive the **development of (mostly) in-house banking applications**, with a primary focus on corporate client credit processes. Played a key role in automating reporting activities, completely overhauling the reporting system using SAS and Python, resulting in increased efficiency and accuracy.
- Spearheaded the **full automation of reporting procedures**, leveraging SAS and Python tools to streamline and enhance the reporting workflow. Demonstrated proficiency in data analysis and reporting, contributing to a more agile and data-driven decision-making process within the organization.
- Actively participated in an anti-fraud project**, collaborating with cross-functional teams to implement effective measures and safeguards against fraudulent activities within the organization. Applied analytical skills to identify and address potential vulnerabilities, contributing to the overall security and integrity of the financial processes.

Product Development Specialist

10/2018 - 03/2020

ING Bank Śląski

Warsaw, PL

NOTABLE PROJECTS

Complaints Classification

Developed and implemented a **service for classifying incoming complaints** within a banking environment, achieving an accuracy rate of approximately 85%.

Significantly contributed to the enhancement of automation in the complaint processing workflow, resulting in improved operational efficiency and customer experience.

Semantic Search

Participated in developing bank's first semantic search (RAG) solutions. Built many internal PoC's including e.g. LLM assistant, Gemini Pro RAG chatbot, model quantizations.

Speaker at the **Data Science Summit 2023** conference - presentation *From words to meaning: semantic search in the AI era*

Sensitive data detection

Sensitive data detector (GDPR) in short notes in company's CRM software.

EDUCATION

Quantitative Methods in Economics and Information Systems (PL)

2016 - 2021

[SGH Warsaw School of Economics](#)

Warsaw, PL

CORE STACK

Cloud

Google Cloud Platform · OpenAI ·

Data, infrastructure and DevOps

Airflow · Celery · PostgreSQL · Elastic · RabbitMQ · Kubernetes · Docker · Jenkins · Git · Ansible ·

Natural Language Processing (NLP) Tools

Transformers · spacy · NLTK · FastText · Morfeusz ·

Deep Learning Libraries

PyTorch · Tensorflow (keras) ·

Web Frameworks and API Development

FastAPI · Flask · TorchServe ·

GDPR NOTE

I agree to the processing of personal data provided in this document for realizing 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)