

Polyna German

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EDUCATION

University of Toronto

Honors Bachelor of Computer Science and Economics, minor in Statistics

Toronto, ON

Class of 2027

Relevant Coursework: OOP; Linear Algebra; Mathematical Analysis; Microeconomics; Macroeconomics; Data Analysis; Data Science; Data tools for Economists; Statistics; Econometrics; ML; AI; Surveys, Sampling & Observational Data

WORK EXPERIENCE

Canadian Economics Association

Research Assistant

Toronto, Canada

April 2025 - Present

- Collected and analyzed faculty and graduate student data from Canadian university economics departments.
- Used ChatGPT and recent academic methods to infer demographic information (gender and race) from names.
- Presented analytical findings to supervisors and research teams.

Department of Economics UofT

Research Assistant

Toronto, Canada

April 2025 - Present

- Developed an interactive microeconomics web platform with dynamic data visualizations using JavaScript, Python, HTML, and CSS, ensuring usability, responsiveness, and reliable data integration.
- Merged multiple institutional datasets and implemented optimized data-processing workflows, increasing address-matching and data-merging efficiency by approximately 30%.

Gexateq

Software Engineer

Minsk, Belarus

July 2024 – September 2024

- Developed the backend of a banking application using FastAPI for services, SQLAlchemy for database interactions, and PostgreSQL for data management.
- Managed containerization with Docker, orchestrated services with Docker Compose, and handled database migrations using Alembic, Celery for task scheduling.
- Utilized Git for VS, DBeaver for database management, pytest for unit testing, Poetry for virtual environments.

PROJECTS

Canadian Federal Election Vote Share Prediction

December 2025

- Developed a multinomial logistic regression model in R to predict Canadian federal election vote shares, applying poststratification to census and survey data to correct for demographic sample bias.

Boom vs Bust: The Impact of Economic Cycles on Patent Litigations

January 2025 – April 2025

- Aggregated and analyzed court case durations, correlating them with economic indicators like GDP, education levels, and personal income using Python (Pandas, NumPy, Matplotlib, Seaborn, Sklearn).
- Utilized machine learning techniques (Regression Tree, Bagging, and Random Forest) to analyze the impact of economic cycles on patent litigation trends, and integrated data via an API, web-scraping.

Spydle Game

October 2024 - December 2024

- Developed the frontend of a multiplayer word game using Swing and assisted in transitioning to React for improved UI/UX, utilized Spring Boot for backend integration and real-time gameplay features.

SKILLS

Programming Languages: Python, Java, CSS, HTML, R, SQL, JavaScript.

Technologies & Tools: REST API, SQLAlchemy, Docker, docker-compose, Spring Framework, Swing, React, PostgreSQL, Power BI, Alembic, Git, DBeaver, NumPy, Pandas, Matplotlib, Seaborn, Jupyter Notebook, Matplotlib, Redis, Celery, Poetry, Microsoft Suite, VSCode, JetBrains Toolbox.

Languages Spoken: English, Belarusian, Russian.