Slava Kohut, BSc, PhD

Data Scientist, Statistician, Software Developer, Risk Analyst Lead

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SUMMARY OF QUALIFICATIONS

- More than **12 years of experience** in quantitative research, including **five years in the financial industry.**
- Proven hands-on ability to **transform data** into actionable recommendations for facilitating **business decisions.**
- Areas I have had exposure to include (but not limited to): machine learning, computational statistics, software development, quantitative risk analysis, spatial analysis, development of algorithms.
- Experience applying machine learning techniques to insurance data.
- I enjoy coding in **Python** and **R**; experienced in **SQL**, **git**, **AWS**, **UNIX** shell scripting, data visualization in **ggplot2** and **matplotlib.**
- Effective communicator recognized by multiple awards.

PROFESSIONAL EXPERIENCE AND SELECTED ACHIEVEMENTS

Aug 2017 – present: AIG, Data Scientist (AVP since May 2022), Calgary, AB, Canada

American International Group (AIG) is a global insurance provider; in top 20 world largest insurers.

- **Developed models** for quantifying temporal and spatial distributions of natural and man-made catastrophe losses. Analyzed large volumes of data and **applied machine learning algorithms**.
- **Built from scratch** an analytical engine for a reinsurance pricing platform in Python (collaborative effort of five individuals). Set up and maintained the CI/CD infrastructure for the project at an early stage. The engine includes more than **40 000 lines** of code, utilizes cloud technologies, and is responsible for pricing more than a **billion dollars** worth of contracts.
- **Improved statistical algorithms** for risk quantification. Improvements at times resulted in more than 100% savings of computational time.
- **Developed** and maintained in-house **software tools** for data analytics, portfolio optimization, and risk management. Created and owned an internal R package repository.
- **Presented research findings** to the Hazard Research Team, Catastrophe Modeling Team, and business decision makers with non-technical backgrounds. Provided independent evaluation reports for internal research initiatives to senior management.

Jun 2016 – Sep 2016: ABB Group, Data Scientist (internship), Ladenburg, Germany

ABB is a technology leader in electrical engineering, robotics, and automation technology.

- Processed and analyzed **heterogeneous sensor data** from a production line. The data were provided by a multinational company with a **billion-dollar revenue** as part of a joint project involving largest German research-intensive companies.
- Developed a method for **classification of process fault scenarios** and implemented it using Python and R. This resulted in identification of possible fault scenarios.
- Proposed a **data-driven method** for early detection of process faults for usage in a decision-support platform for plant operators.
- Presented preliminary results at a meeting with an industry partner.

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Sep 2012 – Aug 2017: The University of Western Ontario, Research and Teaching Assistant, London, ON, Canada

- Developed extensions to a commercial **computational chemistry software package** to validate mathematical models. Programs totaled in more than **5000 lines** of code.
- Used **cloud computing** to model chemical phenomena and analyzed modeling data.
- Received one of the seven elite Ontario government scholarships for outstanding students pursuing a PhD degree in a university-wide competition. **Total value of 160 000 CAD**.
- **Coauthored eight research articles** in international top-tier journals. **Four awards** for best presentations and research excellence. Presented research findings at three international conferences.
- Assisted in teaching second-year and third-year undergraduate courses. Conducted tutorials and managed lab sessions. Marked assignments and provided guidance for more than 30 students.
- Facilitated departmental outreach events targeting over 100 high-school students.
- Trained, supervised, and evaluated four undergraduate researchers.

Jan 2009 – Jul 2012: Belarusian State University, Research Assistant, Minsk, Belarus

- Conducted experimental measurements and computer simulations of chemical reactions for **energy optimization of industrial processes**. Processed experimental data using statistical analysis and regression techniques.
- Ran computer simulations to predict and validate thermodynamic properties.
- **Coauthored seven research articles** in international top-tier journals. **Eight awards** for best presentations and research/academic excellence. Presented research findings at six national and international conferences.
- Research proposal writing for Belarusian State University Research Fund. Proposals resulted in two funded research projects.
- Trained, supervised, and evaluated two undergraduate researchers.

EDUCATION

- **PhD in Computational Chemistry and Scientific Computing** (2017), 90%, The University of Western Ontario (Canada).
- **BSc in Chemistry** (2011), ***graduated with Distinction***, 93%, Belarusian State University (Belarus).

SELECTED AWARDS

2016	Queen Elizabeth II Graduate Scholarship in Science and Technology. **Total value of $10,000.**
2016	RISE Professional Fellowship, German Academic Exchange Service. **Total value of €2300.**
2016	Winner of the Industry Problem Solving Week, The University of Western Ontario.
2012–2016	Ontario Trillium Scholarship. **Total value of $160,000.**
2010	First Prize, Belarus National Competition of Chemistry Student Researchers.