# SLAVA KOHUT, BSc, PhD

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## **PROFILE**

Goal-oriented **Data Scientist** with a diverse experience in data analysis, statistical learning, financial modeling, and quantitative risk analysis. Recognized as an effective communicator. Interested in financial technology.

# **QUALIFICATIONS SUMMARY**

- Data mining with Python, R, and SQL
- Programming (R, Python, Fortran, C/C++, UNIX shell scripting, git)
- Data visualization (ggplot2, matplotlib)
- Machine learning (caret, scikit-learn)
- Big data analytics (AWS)
- Financial modeling and quantitative risk analysis
- Development and implementation of algorithms
- Computer algebra systems (Mathematica, Maple)

- 9+ years in quantitative research
- Programming (R, Python, Fortran, C/C++, UNIX shell 1.5+ years of experience in the financial industry
  - 13 peer-reviewed publications in top-tier international research journals
  - · Strong analytical and mathematical skills
  - Excellent oral and written communication skills proven by multiple awards
  - Team management, supervision and negotiation skills
  - Initiative and self-reliance

## **EDUCATION AND PROFESSIONAL DEVELOPMENT**

- PhD in Computational Chemistry and Scientific Computing (2017), 90%, The University of Western Ontario (Canada)
- BSc in Chemistry (2011), 93%, Belarusian State University (Belarus)
- Mastering Software Development in R Specialization, Coursera
- Data Science Specialization, Coursera, via Johns Hopkins University (USA)
- Ontario Summer School on High Performance Computing, Compute Canada
- Certificate in Academic and Professional Communication, The University of Western Ontario (Canada)
- Training on Corporate Ethics, Mitacs (Canada)

## PROFESSIONAL EXPERIENCE AND SELECTED ACHIEVEMENTS

VALIDUS RESEARCH Validus Research Inc. (Canada)

Data Scientist (Research Team)

Aug 2017 - present

- Developed robust models for quantifying temporal and spatial distributions of natural and man-made catastrophe losses by analyzing large volumes of data and applying supervised and unsupervised statistical learning algorithms.
- Collaborated with the Catastrophe Modeling Team to identify areas of improvement for the Validus View
  of Risk. Developed a tool for excess-per-risk reinsurance treaty losses prediction for the purpose of
  reducing modeling time for live reinsurance deals.
- Developed and maintained in-house software tools for data analytics, portfolio optimization, and risk management. Created and maintained the Validus R package repository (VRAN).
- Presented research findings to the Hazard Research Team, Catastrophe Modeling Team, and business decision makers with non-technical backgrounds.



ABB Group (Germany)

**Data Scientist Intern** 

Jun 2016 - Sep 2016

- Participated in a joint project run by a consortium of research-intensive companies. The main goal of the project was to develop a decision-support platform for plant operators with the use of big data technologies.
- Processed and analyzed heterogeneous sensor data from a production line. The data were provided by an international chemical company with a billion-dollar revenue.

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#### ABB Group - Data Scientist Intern (continued)

- 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.
- Presented preliminary results at a meeting with an industry partner.



# The University of Western Ontario (Canada) Research and Teaching Assistant

Sep 2012 - Aug 2017

- 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 7 research articles in international top-tier journals. Four awards for best presentations and research excellence. Presented research findings at 3 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 4 undergraduate researchers.



#### Belarusian State University (Belarus)

#### Research Assistant

Jan 2009 - Jul 2012

- 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 6 research articles in international top-tier journals. Eight awards for best presentations and research/academic excellence. Presented research findings at 6 national and international conferences.
- Research proposal writing for Belarusian State University Research Fund. Proposals resulted in 2 funded research projects.
- Trained, supervised, and evaluated 2 undergraduate researchers.

#### 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
2014	CSC 2004 Conference Travel Award. Award value of \$800
2011, 2012	Travel Award, 13 <sup>th</sup> and 14 <sup>th</sup> JCF-Frühjahrssymposium, Erlangen, Germany. <b>Total value of €530</b>
2011	Best Oral Presentation Award and Jury's Choice Award, 18 <sup>th</sup> International Lomonosov Conference
	of Student Researchers and Young Scientists, Moscow, Russia
2010	First Prize, Belarus National Competition of Chemistry Student Researchers