Konstantin Volodin
Data Scientist

volodin.kostia@gmail.com
+1-438-370-2046
Montréal, QC, Canada

konstantin-volodin.github.io
github.com/Konstantin-Volodin
linkedin.com/konstantin-volodin

SKILLS

Competencies	Data Science & Engineering, Decision Sciences, Software Development
Tech Stack	**Languages:** Python, SQL, R **Data/ML:** Power BI, PySpark, PyTorch, Plotly, Gurobi **Platforms:** Git, AWS, Docker, DataBricks

EXPERIENCE

Data Scientist, Advanced Analytics Solutions Center Oct 2022 — Present
Immigration, Refugees and Citizenship Canada *Montreal, Canada*

- Work in a cross-functional team with Software Engineers, Product Managers, and Business Analysts to build data-driven decision-support tools used in daily operations.
- Lead engineer for the Temporary Resident Visa predictive platform, the highest-volume file classification system on our team, scoring approximately 200,000 files per week.
- Helped migrate an SPSS monolith into a production PySpark pipeline; refactored the Python codebase (removed approximately 10,000 LOC) and improved end-to-end performance by about 15% (so far).
- Design and maintain a 30+ bin classification system that consolidates 40+ SQL views and powers daily decisions for hundreds of IRCC officers.
- Own 10+ weekly operational reports, downstream data contracts, and ad-hoc analyses that inform business decisions and operational KPIs.

Research Assistant Mar 2023 — Aug 2023
McGill University *Montreal, Canada*

- Built and deployed two public-facing sites (AWS/GCP) for animal-accident management and glyphosate research.
- Animal-accident site tracks accidents and optimizes wildlife-crossing placement via a facility-location model.

Data Analyst, Anti-Racism Task Force Dec 2020 — Oct 2022
Immigration, Refugees and Citizenship Canada *Ottawa, Canada*

- Served as a technical lead for an Anti-Racism Task Force team; set analytics priorities and drove deliverables.
- Ran a department survey and HR analyses that uncovered hiring inequities and informed policy decisions.
- Prepared executive-ready briefings, converting analysis into actionable insights that secured leadership buy-in.

Research Assistant Feb 2020 — Aug 2020
Ottawa Hospital Research Institute *Ottawa, Canada*

- Analyzed patient-level and scheduling datasets to prepare inputs for optimization and simulation models.
- Applied operations research techniques to improve patient scheduling, block scheduling, and capacity planning.

Research Assistant May 2019
University of Ottawa *Ottawa, Canada*

- Applied Markov Decision Process model for surgery scheduling, to reduce wait times for high-priority patients.
- Conducted simulation experiments to evaluate hypotheses and support a master's student thesis.

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EDUCATION

Master of Management in Analytics, *McGill University, Desautels Faculty of Management* — Jul 2022 — Aug 2023

Bachelor of Commerce (Finance), *University of Ottawa, Telfer School of Management* — Sept 2016 — Apr 2020

PROJECTS

Infinite DnD   **July 2025 — Present**
Personal

- Working on an LLM agent based system using open-source models to run Dungeons & Dragons campaigns from user-defined configurations; supports fully automated play or mixed human/agent interaction.
- Architected modular LLM agents for distinct responsibilities with scoped world knowledge to improve responses.
- Contains a persistent world state allowing agents to create lasting consequences (quests, NPC state, world events)
- Designed a React front-end to present narrative, visualize world state, agent logs, and enable user inputs.

Academic Consulting Project   **Oct 2022 — Apr 2023**
CAE Inc.   *Montreal, Canada*

- Developed an automated time-series forecasting pipeline to predict demand for thousands of aviation components; automatic algorithm selection based on component characteristics and historical performance.
- Designed an inventory management policy that balanced forecast uncertainty, lead times, and service-level targets.
- Communicated results to stakeholders through an executive report, translating technical findings into actionable recommendations for procurement and operations.

Workload Allocation   **May 2019 — Feb 2020**
Telfer School of Management   *Ottawa, Canada*

- Designed and solved a mixed-integer optimization model to generate a full-year teaching schedule; decreased planning time from weeks to hours and increased constraint satisfaction.
- Implemented a production web application (React frontend, Django backend) to enable staff to run rescheduling scenarios and capture instructor preferences.
- Enhanced the model to incorporate soft constraints for instructor preferences and room capacities, improving perceived fairness and utilization.

ABOUT ME

- **Languages**: English (fluent); Russian (fluent); French (B1).
- Active rock climber, hoping to progress toward multi-pitch outdoor routes and challenging boulder problems.
- Avid fantasy reader of both classic and contemporary epics.
- Aspiring house dancer, practicing foundational footwork and freestyle.