Arsenii Stolbov

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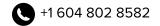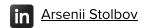## EDUCATION

University of British Columbia | Vancouver, BC | Sep 2021 – Present
Bachelor of Science – Computer Science & Chemistry (Combined Major in Science)
- **Coursework:** Data Structures & Algorithms, Machine Learning, Relational Databases, Computer Networking, Computational Chemistry.
- **Honors:** International Major Entrance Scholarship (IMES) at UBC
- **Activities:** Professional Ice Hockey Player (2007 - 2021)

Certificate in Project Management | Google (Coursera) | Aug 2025

WORK EXPERIENCE

AI Software Developer | Buffoli Industries (Brescia, Italy) | Summer Internship | May 2025 - Aug 2025
- Built a 3-stage RAG + Angular UI; cut time-to-first-answer **at p95 by ~30%**.
- Switched to docs-first retrieval; reduced web calls by roughly half and drove a double-digit gain in internal-doc hit rate.
- Optimized CSV/MSG ingestion; throughput up 2–3× and peak **RAM down by about one-third to one-half** on large files.
- Implemented **end-to-end RBAC** (admin/read/write/none); unauthorized visibility incidents eliminated.
- Added a **GraphRAG route**; improved multi-document answer success on internal evaluations.
- Modularized the pipeline and added context guards; over-length crashes eliminated and release friction reduced.

Software Engineer | Gidrolock - Smart Water-Leak Protection (Moscow, Russia) | Internship | Jan 2023 - Jan 2024
- Programmed firmware for Winner Radio and Premium/Standard Wi-Fi controllers using C/C++ in PICmicro IDE, implementing RS485 support for robust serial communication between sensors and control units.
- Developed low-power embedded logic for ZigBee and LoRa radio sensors, reducing battery consumption **by over 25%** through sleep-mode scheduling and interrupt-based wake cycles.
- Engineered real-time leak detection logic with multi-valve response coordination, improving actuation reliability in dual-valve systems and reducing failure rates **by 40%**.
- Built a **delay-tolerant retransmission algorithm** to ensure alarm signals persist for 30 seconds, addressing synchronization issues in asynchronous wireless environments.
- Created **custom embedded communication protocols** for decentralized sensor networks, enabling secure and efficient coordination between heterogeneous IoT devices in smart home ecosystems.

Business Development Manager | Delumo - StartUp (Salzburg, Austria) | Summer Internship | Apr 2024 - Jul 2024
- Launched the English/German website; **traffic up ~65%**; ~18 inbound leads/month after launch.
- Held 20+ conversations with insurance partners in Europe and China; received 2 partnership interest letters and built ~C$55K in likely deals.
- Organized 3 conferences with bronze-level sponsorships; collected **32 qualified leads at ~C$28 per potential customer**.
- Built a simple sales pipeline in the CRM; kept deal notes clean and up to date; cut time from first email to first meeting by ~5 days.
- Created sales materials (decks, one-pagers) tailored for English and German audiences.

Founder & Product Lead | Cross-Border Supply Chain (China–Russia) | Self-employed | May 2021 – Feb 2022
- Achieved **C$10K** in monthly sales within three months of launch.
- Expanded the Telegram customer channel to ~**350 members** and deployed a support bot to streamline inquiries.
- Maintained customer response times within 24 hours.
- Directed end-to-end operations, including supplier sourcing, quality assurance, consolidation, international freight, and last-mile delivery.

PROJECTS

Python-based Bayesian Optimization in Organic-Synthesis: Maximizing Reaction Yields (Sep 2024 - Jan 2025)
- Built a **Python Bayesian Optimization pipeline (GP + EI)** for Pd-catalyzed arylation, improving predictive accuracy by ~20% vs. MLR and converging in 2–3 optimization rounds.
- **Cut wet-lab runs by ~50%** (≈14–21 experiments to optimal vs. ≈35–40 with conventional design), compressing iteration time from weeks to days.
- Productionized a reproducible workflow (scikit-learn/BoTorch) with **k-means seeding + Thompson Sampling benchmark**, parameterized over solvent/temp/catalyst.

Real-time trading platform (Oct 2024 - Dec 2024)
- Built and tested a Node.js backend with RESTful API (POST, GET, PUT, DELETE) to manage real-time trading data on an OracleDB.
- Developed **complex SQL scripts for data aggregation, joins, and batch processing** with a connection pooling strategy for high performance.
- Implemented a web-based frontend using **HTML, JavaScript, and Fetch API** to perform CRUD operations.

TECHNICAL SKILLS

Web Technologies: React.js | Node.js | HTML | CSS | JavaScript | Bootstrap | jQuery | Angular
Programming Languages: Java | C | C++ | Python | SQL | Swift
Data Science: TensorFlow | Keras | NumPy | Matplotlib | OpenCV | Pandas | scikit-learn
Databases: MongoDB | Firebase | MySQL | Oracle DB | Chrome DB
Miscellaneous: Git | REST APIs | Linux | Data Structures and Algorithms | Object-Oriented Programming