

# Abdul Khurram

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Available for Co-ops/Internships (Open to Relocation): May–Dec 2026 | Full-time: May 2027+

## EDUCATION & AWARDS

### University of British Columbia

Vancouver, BC, Canada

*Bachelor of Science in Computer Science (Expected Graduation: May 2027)*

### Euclid Mathematics Contest, University of Waterloo

2021

*Top 5% Internationally, Certificate of Distinction*

## EXPERIENCE

### Software Developer Co-op | *Apache Spark, Scala, Airflow, Kafka, Linux*

Jan. 2026 – Present

*RBC Royal Bank*

*Vancouver, BC, Canada*

- Engineered secure **Scala** pipelines orchestrated by **Airflow DAGs** to process **50M+ daily transactions** from **Delta Lake**, enforcing strict **RBAC/encryption** controls on **petabyte-scale sensitive** financial data.
- Optimized **Spark** jobs by refactoring **SQL** queries and tuning **AQE/cluster memory**, solving resource bottlenecks and reducing **latency** by **40%**.
- Developing **multi-region** data pipelines with built-in **fault tolerance**, **idempotent** re-runs, and automated **failover** for critical banking workloads.
- Implementing job **monitoring** and **alerting** to track **SLAs** and ensure pipeline reliability, enabling rapid incident response for downstream teams.

### Software Engineer Intern | *TypeScript/Node.js, AWS, Playwright, OpenAI*

Jan. – Dec. 2025

*Otto Optical Systems (Contello.ai)*

*Toronto, ON, Canada*

- Built a **distributed async pipeline** processing **thousands of posts/day** with stream-based analytics, audit logs, and **fault-tolerant** automation across major platforms.
- Engineered real-time **ETL** pipelines on **AWS (SQS/S3)** with secure **Flask/FastAPI** backends, reducing data availability latency from hours to seconds at **thousands/day** scale.
- Raised scheduler reliability to **99.9%** by integrating **Playwright E2E** gates into **GitHub Actions CI/CD** with **Docker** containers, adding **retry/backoff** and **hardening auth/session**.

### Software Developer & Team Lead | *Unreal Engine, C++, Python*

Sept. – Dec. 2024

*UBC Emerging Media Lab*

*Vancouver, BC, Canada*

- Led an AI-powered VR platform in **Unreal (C++)** with interactive UI state machines for clinical scenarios.
- Increased stability with a **thread-safe, multithreaded supervisory layer (C++/Python)** that monitors the AI patient and auto-corrects off-protocol replies.
- Delivered a functional prototype in two weeks, securing funding; cut backend costs by **90%** and improved real-time performance by **40%**.

## PROJECTS

### Amazon Marketplace Analytic Software | *Java, Python, Facebook Prophet, SQL/JSON*

**Academic Project**

- Engineered an Amazon Marketplace analytics tool, enhancing seller operational efficiency by **35%**.
- Built ML demand forecasting with Facebook Prophet time-series models, delivering 30-day sales projections with 80% confidence intervals and reducing overstock by **50%**.
- Designed a **Python microservice + Spring Boot** Java client architecture with optimized **data structures** and **REST APIs** for real-time forecast retrieval.

### SoloPilot | *Python, TypeScript/Next.js, AWS, LangChain*

**Personal Project**

- Building a freelancer workspace that unifies client intake, planning, proposals, and delivery with **AWS (S3, CloudWatch)** and **CI** gates.
- Shipped an email intake console that triages threads, captures scope, and renders versioned proposal PDFs via a Vision Model for precise edits.
- Built a **Python** evaluator→revisor agent loop with rubric-based **benchmarking**, improving response quality via measured iterations.

## SKILLS

**Languages:** Java, Python, Scala, TypeScript/JavaScript, SQL, C/C++

**Platforms & Tools:** Apache Spark, Airflow, Kafka, Delta Lake, AWS, Spring Boot, Flask, Docker, Git, RDBMS

**Other:** Cross-functional Collaboration, Technical Leadership, Agile, Technical Documentation