

# Abdul Khurram

+1 (236) 865-4820 | [rafay@abdulkhurram.com](mailto:rafay@abdulkhurram.com) | [linkedin.com/in/abdulkhurram](https://linkedin.com/in/abdulkhurram) | [github.com/arkb75](https://github.com/arkb75)

## 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, SQL, Python, Linux

Jan. 2026 – Present

RBC Royal Bank

Vancouver, BC, Canada

- Optimized **Apache Spark** jobs by refactoring **SQL** queries and improving data partitioning strategies, reducing job execution time by **40%**.
- Building distributed **Spark** pipelines processing **10M+ daily transactions** across enterprise general ledgers.

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

Jan. – Dec. 2025

Otto Optical Systems (*Contello.ai*)

Toronto, ON, Canada

- Engineered real-time **ETL** pipelines on **AWS (SQS/S3)** with TypeScript/Next.js + **Node** dashboards; owned design→deploy→diagnostics/**DevOps** (**CloudWatch**) at **thousands/day** scale.
- Accelerated content prep by ingesting brand docs with an **NLP** step, caching embeddings, and auto-injecting channel-specific context while enforcing **API guardrails**.
- Expanded coverage across major platforms with a **distributed async pipeline**; added stream-based analytics, audit logs, and resilient Canva export automation.
- Raised scheduler reliability to **99.9%** by moving generation to **OpenAI Responses API**, integrating **Playwright E2E** gates into **CI/CD**, hardening auth/session, and adding **retry/backoff** plus **CloudWatch alerting**.

### 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 **multithreaded supervisory layer (C++/Python)** that monitors the AI patient and auto-corrects off-protocol replies.
- Delivered a functional prototype in two weeks, securing project funding.
- Cut backend costs by **90%** via system optimizations, improving real-time performance by **40%**.

## PROJECTS

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

Personal Project

- Building a client-to-codebase bridge for solo freelancers that unifies client intake, planning, proposals, and delivery in one workspace.
- Shipped an email intake console that triages threads, captures scope, and renders versioned proposal PDFs with freeform annotations via a **Vision Model** that captures and translates intent for precise edits.
- Built a **Python** evaluator→revisor agent loop with rubric-based **benchmarking** (score + revision), improving response quality via measured iterations.
- Exports approved proposals as structured **PRDs** optimized for AI IDEs (**Antigravity, Cursor, VS Code**); provider-agnostic **LLM** layer; **CI** gates; **AWS** ops (**Bedrock**, S3 versioning, CloudWatch).

### 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 + Java client** architecture with REST APIs for real-time forecast retrieval.

### Entropy Comparison in Random Generators | Java, C++, Swift

Research Project

- Conducted an analysis comparing entropy levels of TRNGs vs. PRNGs for cryptographic security applications.
- Developed and executed tests in **Java, C++, and Swift**, benchmarking entropy quality and generation speed.

## TECHNICAL SKILLS

**Languages:** TypeScript/JavaScript, Java, Python, SQL, C/C++, Swift, HTML/CSS, React Native

**Platforms & Tools:** Next.js, Node.js/Express, Playwright; AWS (Amplify, Lambda, DynamoDB, S3, SQS, CloudWatch); OpenAI API; Meta/LinkedIn/X/Canva APIs; Git, Docker, Yarn, Tailwind CSS, RDBMS