Abdul Rafay Khurram

https://www.abdulkhurram.com

+1 (236) 865-4820 rafay@abdulkhurram.com github.com/arkb75 linkedin.com/in/abdulkhurram

Relevant Experience

Software Developer **Vancouver, BC, Canada**
UBC Emerging Media Lab *Sept. 2024 – Present*

- Leading a team to develop an AI-powered VR platform for the UBC School of Nursing, integrating Large Language Models (LLMs) and Unreal Engine to simulate real-time clinical scenarios.
- Building a secondary AI layer to monitor and adjust patient responses, ensuring accuracy and improving system stability.
- Delivered a prototype in two weeks, showcasing realistic patient dialogues and securing further project funding.
- Optimizing LLM-driven patient behavior for more human-like interactions, enhancing the platform's educational impact.
- Cut backend costs by 90% through AI optimizations on the DXL server, improving system performance by 40%.

Software Engineer **Maryland, USA**
Faaz Consulting *May – Sept. 2023*

- Led the development of client applications in Java and Python, improving UI responsiveness by 30%.
- Enhanced legacy systems with new UI features using Vue.js and JavaScript, increasing user engagement by 15%.
- Automated DevOps processes with Jenkins and Docker, reducing deployment times by 20%.
- Delivered software enhancements for enterprise clients, adhering to strict deadlines and project specifications.

Relevant Technical Projects

Constructify **Personal Project**
May 2024 – Present

- Built an A-Z home-building platform with transparent project tracking and a service provider marketplace, targeting aspiring homeowners and construction firms.
- Developed a responsive frontend using Vue.js and Vite, optimizing load times and performance.
- Designed an intuitive UI/UX through targeted user research and iterative testing, leading to a 25% reduction in user onboarding time.

Amazon Marketplace Analytic Software **Academic/Personal Project**
Sept. – Dec. 2022

- Engineered an Amazon Marketplace tool, enhancing seller operational efficiency by 35%.
- Implemented an algorithm predicting ASIN trends, leading to a 50% reduction in overstock.
- Enabled multi-format data integration, including SQL and JSON, improving data retrieval times by 40%.

Research

Entropy Comparison in Random Generators **Research Project**
Sept. – Dec. 2020

- Conducted a comprehensive analysis comparing the entropy levels of true-random vs. pseudo-random number generators, utilizing mathematical algorithms and hardware-based phenomena.
- Developed and executed tests in Java, C++, and Swift, measuring performance and entropy using TRNGs (True-Random Number Generators) and PRNGs (Pseudo-Random Number Generators).
- Demonstrated TRNGs' superiority for cryptographic purposes, resulting in more secure and unpredictable sequences compared to PRNGs.
- Published results in a detailed research paper, contributing to the understanding of secure random number generation.

Skills

Languages: Java, Python, JavaScript, SQL, C/C++, Swift | **Frameworks:** Node.js, Vue.js, React.js
Tools: Git, Docker, OracleDB, MySQL, NGINX | **API and Integration:** API Integration, System Administration, SQL
Testing: Unit, Integration, End-to-End, Smoke, A/B

Education

The University of British Columbia *(BSc in Computer Science - Expected Graduation: 2026)* **Vancouver, BC**