

# Ishank Sharma - Software Engineer

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## SUMMARY

Computer Science graduate student at CSULB with 3 + years of experience developing data intensive applications on Snowflake and Databricks with scalable architecture, and data pipelines. National hackathon winner with open source contribution at Archive.org.

## EDUCATION

California State University, Long Beach

Aug 2024 - May 2026

Master of Science in Computer Science

**Concentrations:** Software Engineering & Artificial Intelligence

Ramaiah Institute Of Technology, Bengaluru, India

Aug 2017 - May 2021

B.E Information Science and Engineering

## TECHNICAL SKILLS

- **Languages:** C, C++, Java, Python, Javascript
- **Libraries:** Spring, Node.js, Flask, Fast API, Keras, Tensorflow, PyTorch, Scikit Learn
- **Databases and Cloud Data Warehouses:** MYSQL, MongoDB, Redis, Databricks, Snowflake
- **Cloud/Tools:** AWS (Lambda, EC2, SQS, Step Functions), Docker, Git, Linux

## PROFESSIONAL WORK EXPERIENCE

California State University, Long Beach – College of Business, Long Beach, California

Graduate Research Assistant (Python, HTML, CSS, JS, Machine Learning)

Feb 2025 - May 2025

Analysed focus zones on digital ads with 95% accuracy and enhanced results with the help of live heatmap using KDE

CommercelQ

Software Engineer (Intern → SDE I → SDE II) (Python, Java, Databricks, SQL, Snowflake)

Feb 2021 - Aug 2024

- **AWS-based Recommendation System:** Built a media budget recommendation pipeline with AWS Step Functions, SQS, Lambda, and 40 SQL modules, predicting ad spend with **95% accuracy** and saving clients **\$200K annually** while reducing processing time from **1 day to 3 minutes**.
- **Cold Start Recommendation:** Designed and deployed a synthetic data solution integrating sales and advertising performance data, delivering recommendations with **90% accuracy** for clients without historical ad performance.
- **Data Warehouse Migration (Snowflake to Databricks):** Orchestrated migration of a budget prediction feature, reducing infrastructure costs by **52%** and improving latency by **80%** through strategic indexing and broadcast joins.
- **Amazon Advertising Campaign Platform:** Engineered a platform for creating and managing Amazon advertising campaigns, boosting user productivity and campaign effectiveness.
- **Automated Strategy Execution Pipeline for Criteo Ads:** Developed an automation pipeline to optimize Criteo advertising campaigns, enhancing ad performance and operational efficiency reducing manual campaign operations by **60%**.
- **Multi-Cluster Warehouse Simulation:** Simulated high-load multi-cluster environments in Snowflake to evaluate and optimize concurrency performance for dynamic SQL workloads.
- **Performance Monitoring Dashboards:** Crafted TP99 performance dashboards with New Relic, doubling transparency into page load times and accelerating bottleneck identification.
- **Custom SQL Migration Layer (Snowflake to Firebolt):** Bench-tested Firebolt vs Snowflake with custom migration layer, cut migration time **by 40%**.

## Open Source Contributions and Side Projects

- **Firebolt Data Warehouse** ([Github](#))  
Developed and owned an end to end geospatial analytics dashboard that fetches accidents dataset on an interactive map, **implemented connection pooling** to enhance latency of the dashboard **increasing QPS by 85%**.
- **Internet Archive**  
**Archive.org** : Added keyboard support for zooming in/out on Safari and increased test coverage. ([Github](#))  
**OpenLibrary.org**: Enhanced SEO by adding metadata to the index page, improving search visibility and ranking. ([Github](#))  
**BookGenomeProject.org**: Developed an XML parser for identifying page types in Internet Archive books. ([Github](#))
- **Retrieval Augmented Generation Implementation** ([Github](#))  
Constructed a retrieval-augmented generation pipeline utilising LangChain and Python, achieving a **40% reduction** in AI hallucination while improving contextual accuracy based on BLEU scores.
- **Deep Learning Experiments:** ([Github](#))  
Investigated the impact of different activation functions on deep learning model performance and published findings to fix the three biggest causes of inaccurate image classification and gradient vanishing.

## ACHIEVEMENTS

- **Winners Smart India Hackathon** - Largest National Hackathon with over **200,000+ Participants**
- **Runners Up** - Microsoft IncubateIND Innovation Series Hackathon
- **Top 1.2%** on Competitive Coding Platform - CodeWars