

Aryan Kapoor

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EXPERIENCE

Amazon

June 2025 - Present

Software Development Engineer

- Designed and built a scalable, event-driven microservice from scratch—using AWS resources—with a comprehensive operational review, handling large asynchronous workloads and boosting automated catalog enforcements by $20\times$
- Productionized the division's first GenAI tool using web crawling LLMs, boosting violation detection by 15%
- Employed various AI agents connected to custom MCP servers developing software, increasing output by 30%
- Redesigned a legacy service by using AWS tools (SQS, Lambda) to lower costs by 20% and reduce operational load
- Identified & plugged 15 gaps in alarming & monitoring of team's services, improving overall response time by 25%
- Spearheaded initiatives across engineering, product & operations teams removing $\sim 20,000$ catalog violations yearly

Amazon

May 2024 - August 2024

Software Development Engineer Intern

- Developed a feature leveraging a dynamic React UI and AWS Glue Job to query a large scale database 3x faster
- Improved investigator handling time by 30% while simultaneously decreasing the tool's operational load by 50%
- Implemented an intuitive UI of a component querying realtime LLM results, 3x efficiency of product audits
- Designed data schema structure for an ML division to easily parse JSON results, increasing outputs by 200%

Amazon

May 2023 - August 2023

Software Development Engineer Intern

- Wrote Python & Scala scripts scheduled through EventBridge that filtered S3 data spanning 8 billion records, which were then fed into various machine learning models assessing the violation risk of respective Amazon products
- Cooperated with cross-functional teams to align on requirements, identifying > 5 million miscategorized products
- Designed an end-to-end process leveraging Lambda & DynamoDB automating reports of $\sim 5,000$ risky sellers

Commercial Metals Company

May 2022 - August 2022

Software Engineering Intern

- Created a full stack application with C# .NET calling APIs identifying ~ 100 errors daily across applications
- Leveraged SQL tables spanning 5 million entries through the Entity Framework using a MVC architectural pattern

PROJECTS

Sentiment Analysis Model | *Python, Machine Learning, Natural Language Processing*

May 2024

- Developed a NLP model with 90% accuracy leveraging linear regression to calculate movie review sentiment
- Created an algorithm plotting sentiment along a Gaussian curve generating classification results for 200 movies

JP Morgan Code for Good Hackathon | *LlamaIndex, React, Node.js, Firebase*

October 2023

- Won a hackathon with over 100 submissions, collaborating with a non-profit to develop a production-ready solution
- Gathered requirements from stakeholders, constructed a system design, and programmed a web app in 24 hours
- Leveraged the LlamaIndex to create a custom LLM chatbot to assist users based on domain information

UTD Fintech, Full Stack Developer | *Python, Next.js, Firebase*

September 2022 - May 2023

- Created a website allowing users to gain financial literacy and analysis on 500 stocks via a Black Litterman model
- Analyzed financial markets using algorithmic models and technical indicators to track and predict stock trends

Arcade Bar Tracker | *C++*

August 2022

- Created a script & corresponding database using a sorted binary search tree housing the data of a bar arcade
- Leveraged a Binary Tree Search to iterate through database values and execute queries with $O(\log n)$ efficiency

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, Scala, HTML/CSS, JavaScript, SQL

Tools and Technologies: AWS, React, Jupyter Notebook, .NET, Pyspark, Next, Node.Js, Firebase

Relevant Coursework: Machine Learning, Advanced Algorithms, Operating Systems, UNIX, Database Design, NLP

EDUCATION

The University of Texas at Dallas

Aug. 2021 – May 2025

Master of Science in Computer Science, Bachelor of Science in Computer Science

GPA: 3.94

- Academic Excellence Scholar | 2021, 2022, 2023 Dean's List