

Abhinav Singh Chauhan

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EDUCATION

Stony Brook University, New York

Master of Science in Computer Engineering

• **Coursework:** Distributed Systems, Computational Models for Computer Engineers, Networking Algorithms and Analysis, Deep Learning, Machine Learning, Convex Optimization, Practical ML and AI

Stony Brook, NY

Aug '22 - Present

Birla Institute of Technology and Science (BITS), Pilani

Bachelor of Engineering (Hons.) in Electronics and Instrumentation

• **Coursework:** Computer Programming, Discrete Mathematics

Goa, India

Aug '15 - May '19

EXPERIENCE

Target Corporation

Software Development Engineer, Core Commerce Target Tech

• Designed Kafka Consumer Segregation design for "Order Pick Up" and "Ship from Store" flows achieving 20 percent increment in the microservice scalability.

• Redesigned Target's "Real-Time Order Modification System" facilitating guests with possible substitute items while placing the orders; led to 30 percent load reduction on the release microservices.

• Collaborated with the Payments team to develop SNAP EBT payments capability resulting in a 20 percent increase in SNAP digital sales.

• Deployed a digital event loader microservice achieving a 30 percent reduction in delivery time of Digital Download orders.

• Consolidated snapshot loader and order loader microservice for consuming events from different microservices; and updating the order database, reducing optimistic deadlock exceptions from 2k to less than 100 per day.

• Implemented the database transaction flow for fetching, and updating the order DB in a single update, attained 50 percent less database calls.

• Developed an automation suite for integration testing of order modification repromise and substitution design, instrumental in 100 percent automation of integration tests in end-to-end order flows.

• **Tech stack:** JAVA, SpringBoot, Apache Kafka, REST API, GIT, JUnit, Mockito, JDBC, Oracle DB, Mongo DB, Docker

Minneapolis, MN

Jul '19 - Jun '22

UST Global

Software Research Intern

• Attained 80 percent automation of "Intelligent Loan System" using REST API to deliver insurance claims to BMW clients on the basis of database-generated profiles.

• **Tech stack:** JAVA, Python, SpringBoot, REST API, GIT, Docker

Trivandrum, India

Jul '18 - Dec '18

PROJECTS

ChatBot implementation with LSTM and CBOW

• Designed LSTM and CBOW models for a chat system, achieving an impressive 93 percent accuracy rate in comprehending and generating responses to user queries.

• Effectively mitigated overfitting and guaranteed robust model performance with a consistent epoch loss reduction of only 6 percent, showcasing adept model optimization and training.

Mar '23 - May '23

Amazon DynamoDB Prototype implementation with Raft Consensus Protocol

• Implemented Raft consensus protocol to design a fault-tolerant key/value storage system across 5 server replicas.

• Engineered a set of Raft instances to maintain enhanced replicated logs across 20 servers and 4 replica groups.

Sep '22 - Oct '22

Thread Safety in Multi-Threaded Microservice Architecture

• Implemented a WorkFlow Executor model to analyze thread safety in a multi-threaded processor achieving a 20 percent efficient processing.

• Orchestrated a thread pool management strategy, leading to a 35 percent overall system efficiency improvement, achieved by reducing thread contention and optimizing resource utilization.

Aug '20 - Oct '20

Generation of User Interest Profile for Web Search Personalization

• Developed a DCIT tree enhanced through collaborative filtering and generated content improved 10.5 percent average precision compared to normal web search personalization.

• Achieved personalized results on ranking of web pages using recommendation system and summarization model with a precision accuracy of 70 percent.

Jan '18 - May '18

SKILLS AND CERTIFICATIONS

- **Programming and Algorithms:** JAVA, C++, SQL, PostgreSQL, MapReduce, RPC, Raft Consensus Algorithm
- **Technical Skills:** SpringBoot, Apache Kafka, REST API, GIT, JUnit, Mockito, JDBC, Oracle DB, Mongo DB
- **Certifications:** Data Structures and Algorithms Specialization, Object Oriented Programming in JAVA Specialization