

AKSHAT NEHRA

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Professional Summary

- **2 yr+ industry experience** in developing, testing, and debugging high-quality software projects.
- **Hands-on experience** in building and deploying scalable serverless applications on **AWS**.
- **Proficient in full-stack development**, emphasizing clean code practices, **OOP principles**, and design patterns.
- **Mastered problem-solving** with over 600 LeetCode questions tackled.
- **Participated and won WinHacks 2024 hackathon challenge**, leading a **MERN stack-based e-commerce website** development, showcasing my ability to collaborate and execute complex projects under pressure.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Java, Python, C, C++, PHP, SQL, HTML, CSS, SASS

Frameworks/Libraries: React.js, React Native, Node.js, Express.js, CodeIgniter, AJAX, Redux, Tailwind CSS

Databases: MySQL, PostgreSQL, MongoDB, Neo4j

Tools and Concepts: Git, GitHub, GitLab, Docker, Heroku, Figma, Photoshop, Postman, Jira, Agile, Scrum

Cloud Technologies: AWS (Amazon Web Services), Serverless, AWS Lambda, API Gateway, Amazon S3, Amazon SQS, Amazon EC2, Amazon SNS, IAM, CloudWatch, ECR, ECS, Docker, Kubernetes

Familiar With: Kafka, Redis, SSO, SocketIO, Angular, Terraform

Software Design Techniques: Object Oriented Programming, Design Patterns

Problem-Solving Skills: Strong problem-solving abilities with experience solving over 600 LeetCode questions.

WORK EXPERIENCE

Research Assistant - [Trant Team](#) and Glass Ontario

May 2024 – August 2024

University of Windsor | Wordpress, PHP, AWS, Azure, Python, Selenium

Windsor, Canada

- **Sole developer** responsible for building **3 portfolio and 2 e-commerce websites** from scratch, implementing responsive, **SEO-optimized designs**, and adding custom plugins, which reduced time-to-market by 50% and enhanced business visibility.
- Developed **automation scripts** for redundant tasks, increasing operational speed by 40%, and integrated **AWS (S3, CloudWatch, Lambda)** to securely handle critical content, preventing unauthorized transmission.
- **Suggested and migrated** existing cloud architecture from **Azure to Hostinger VPS**, reducing costs by 80%.
- **Architected and optimized** cloud storage solutions using **AWS S3**, implementing lifecycle policies and automated data archival, which reduced storage costs and improved data retrieval times.

Software Developer

May 2020 – February 2023

29Kreativ | NodeJS, JavaScript, Git, AWS, Jest, Docker

New Delhi, India

- Built **pixel-perfect websites** using **HTML, CSS, JS, jQuery, and Bootstrap**, focusing on responsive and dynamic user interfaces that enhance user experience.
- Utilized **asynchronous programming** in **Node.js** to develop scalable and efficient server-side applications, handling complex business logic and ensuring robust performance.
- Designed and implemented **microservices architecture** using **Node.js** and **JavaScript**, enabling seamless integration of multiple services and systems.
- Developed and integrated **multiple data sources and databases** into a single system, utilizing **APIs** and **data modeling** to optimize data retrieval and storage. This included working with **NoSQL databases** such as **MongoDB** and **Cassandra**, as well as relational databases like **PostgreSQL**.
- Implemented **user authentication and authorization** using **OAuth** and **JWT**, ensuring secure data exchange and access control between multiple systems and environments.
- Applied **design principles** for scalability, ensuring efficient performance and adaptability of applications, and utilized **caching** to optimize application output.
- Developed and implemented **automated testing platforms** using **Jest** and **Mocha**, and utilized **code versioning tools** such as **Git** to manage and track code changes.
- Collaborated with cross-functional teams to design and develop **cloud-based solutions** using **AWS**, with knowledge of **containerization** using **Docker** and **CI/CD pipelines** to automate build, test, and deployment processes.

PERSONAL PROJECTS

Online Compiler App | *React, Node.js, Express, Docker* ([Link](#)) Sep 2023 – Oct 2023

- **Implemented multi-language support** for **C, C++, Python, Java, and JS** in the Online Compiler App.
- **Integrated advanced features** for code management, including **renaming, resetting, saving, and downloading functionalities**, alongside a prewritten code library and multiple theme support for convenience.
- **Architected a scalable server infrastructure** using **Docker**, optimized for high concurrency, that ensures secure and efficient compilation request handling, significantly boosting code execution performance.

Multi-Database Architecture | *MySQL, MongoDB, Neo4j, Redis Cache, Kafka* ([Link](#)) Oct 2023 – Nov 2023

- **Designed robust multi-database architecture** for a dynamic social media website, integrating **MySQL, MongoDB, Neo4j, Redis Cache, Kafka**, and more optimized for diverse data handling and performance.
- **Enhanced system responsiveness** and user experience by implementing an intelligent **Load Balancer** and leveraging **Redis Cache** for rapid query processing.
- **Achieved high system availability** and fault tolerance with synchronized database replicas; fortified security through comprehensive **encryption, auditing, and proactive monitoring mechanisms** (including alerts).

Social Network Simulation | *Java* ([Link](#)) June 2023 – July 2023

- **Conceptualized and implemented a Java-based application** to simulate the complex dynamics of social networking platforms.
- **Features: Efficient user search**, autocomplete, exact match functionalities, mutual friends identification, minimum friendship paths calculation, top trending hashtags ranking, filter-based search enhancements, and friend suggestion algorithms.
- **Major Data Structures Used: Trie, Graphs, Priority Queue (Max-Heap), HashMaps, HashSet, Regular Expressions.**

ACADEMIC PROJECTS

Optimizing Athena for Cloud Data Analytics | *Python, AWS Athena, Regex, Parquet* Sep 2023 – Dec 2023

- **Optimized AWS Athena** using **data partitioning** and **Parquet format**, reducing query time by 75%, data storage costs by 80%, and query costs by 99.9%.
- **Unified system logs** from various platforms with **RegEx** for analysis.
- **Automated CSV to Parquet conversion** with **Python pandas** and **AWS EC2**. Integrated **Amazon QuickSight** for log visualization and analysis, enabling reporting based on log levels and dates.

Client-Server Application | *C, Linux System Calls, File Handling* Nov 2023 – Dec 2023

- **Developed a client-server application** in **C** for **Linux**, allowing clients to request files from the server.
- **Implemented C-based auto-scaling functionality**, creating a mirror server to efficiently manage server load at 50% capacity, ensuring uninterrupted client access.
- **Executed file search operations** based on size, date, and extension using **Linux system calls** and commands such as **stat, find, socket, accept**, optimizing handling of client requests.
- **Established command syntax validation** within the client process to ensure the correct format of user-entered commands before transmission to the server.

VOLUNTEER WORK AND PARTICIPATION

WinHacks 2024, "Rocket: Shopping Cart App" Challenge Winner ([View Project](#)) Feb 2024

NextGen CTO, Participation ([See Badge](#)) Nov 2023

Chartwell Oak Park LaSalle Retirement Residence, Volunteer Aug 2023

2nd Annual Alumni and Student Pow Wow, Volunteer May 2023

EDUCATION

Master of Applied Computing May 2023 – Aug 2024
University of Windsor — (WinHacks 2024 [Challenge Winner](#)) Windsor, ON

Bachelor's of Technology in Computer Science Aug. 2017 – July 2021
Lovely Professional University — (Top 5% in DSA and Analytical Skills) Punjab, India