# Sparsh Jain

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# EXPERIENCE

Wells Fargo
Bengaluru, India

Software Engineer

• Led the complete development lifecycle of a new suite of microservices using Java Spring Boot, MongoDB and Hibernate to

- interact with MongoDB, leveraging **ElasticSearch** to provide advanced search capabilities, including deployment process on **PCF** (Cloud Foundry) using **Harness CD**. Developed 4 key APIs: search API, suggest API, index API, and delete API.
- Implemented **semantic search** capabilities by integrating ElasticSearch's **ELSER** model for sparse vector search, alongside various third-party models for dense vector search. Leveraged the features like **synonyms**, **phonetic search**, **and NLP analyzers**, resulting in a 30% improvement in search accuracy.
- Built a **ReactJS**-based UI integrating multiple microservices, creating a reusable template. Developed features for Elasticsearch cluster monitoring, document indexing directly, and analyzer preview page to view transformations, enhancing operational efficiency.
- Built a **Spring Boot Admin** dashboard with real-time email alerts for search microservice performance, reducing incident response time by 50% and achieving 99.97% SLA through shard replication for fault tolerance.
- Managed the end-to-end development and integration of **Learning to Rank (LTR)** with click-tracking data, boosting search relevancy by 15% for client-specific queries
- Led the creation and automation of **Kibana** dashboards to visualize Elasticsearch performance, enabling real-time relevancy benchmarking. This automation reduced manual monitoring efforts by 90%, ensuring consistent tracking of search quality metrics.
- Spearheaded the migration of legacy AngularJS web applications to **Angular** and improved the UI, resulting in a 2x improvement in load times and smoother user interactions.

Program Associate

Jul 2022 – Aug 2023

- Integrated DMS system with AWS S3 bucket through StorageGrid with custom metadata which is utilized for downloading and ingestion through Spring based DMS RESTful service.
- Developed a **Spring Shell**-based health check CLI application, automating the monitoring of 9 applications across environments. This facilitated a 60% reduction in manual efforts, improving operational efficiency and enabling identification of potential issues.
- Adopted Karate, Selenium, and Cucumber framework for BDD to automate testing and integrated the results with the Jenkins CI/CD pipeline, covering 90% of test cases and significantly reducing manual testing efforts.
- Developed password encryption utility for encrypt and automate configuration password change reducing manual effort by 75%.

Summer Intern May 2021 – Jul 2021

- Collaborated in a team of 7 interns in developing an ML model and web application to predict the listing gains of an IPO.
- Engaged in the complete software development life cycle using **ReactJs**, **RESTful APIs and RDBMS(Postgres**) including complete testing and deployment of website and ML model and achieved an accuracy of 98%.

# EDUCATION

# Vellore Institute of Technology

Vellore, India

Bachelor of Technology in Information Technology. CGPA - 9.40

Jul 2018 - May 2022

Dehradun Public School

Muzaffarnagar, India

Higher Secondary (Class XII) in CBSE Board. Percentage - 95.4%

Apr 2016 - Mar 2018

#### Projects

# Cyber Bullying Detection | MERN stack, REST, JWT, CNN, Google Vision API

Source Code

- · Built a full stack web application with RESTful APIs and responsive UI using React which can prevent vulgar posts and comments.
- Created a hybrid model with accuracy above 95% to detect cyber bully in text using CNN and KMeans Clustering for images. Utilized Google vision API to extract text from the infographics.

#### Order and Inventory Management System | Springboot, PostgesSQL, Eureka, Keycloak, Docker, Kafka

Source Code

- Created a modular e-commerce microservices using Spring Boot, employing PostgreSQL and MongoDB. Implemented Inter Process Communication and Netflix Eureka for efficient service building. Ensured security with Keycloak, OAuth 2.0.
- Designed API Gateway, established event-driven communication via Kafka, Dockerized the application for streamlined deployment.

#### TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, SQL, JavaScript, Typescript, HTML, CSS

Frameworks: Angular, ReactJs, Next.js, SpringBoot, Node.js, Flask, MongoDB, Selenium

Libraries: Tailwind, Bootstrap, JQuery, Redux, Jest, Junit, Karate, Cucumber

Tools: Git, Docker, Gradle, Maven, Bash Scripting, Webpack, Jenkins, Kafka, AWS S3

Additional Skills: Microservices, REST, GraphQL, Web Sockets, CI/CD, Agile, Unit Testing, BDD, AI/ML, DSA

# CERTIFICATIONS AND ACHIEVEMENTS

White Paper Contest: Winner of Wells Fargo's WPC 2024 under category "Environment, Social, Governance & Tech for Social Good" Elastic Certified Engineer: Issued by Elastic in Nov. 2024

PROB-A-THON: Secured 1st place in the Wells Fargo's PROB-A-THON 2023 for an innovative design solution under the ESG topic.

Cloud Certified: Issued Azure Fundamentals in Oct. 2022 and Azure AI Fundamentals in Nov. 2022 by Microsoft.

Merit Scholarship: Awarded by VIT for the Academic year 2020-2021 and 2019-2020.