Suraj Mishra

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Education

New York University, Courant Institute of Mathematical Sciences - New York City, USA
MS, Information Systems *Sept 2024 - Present*
Relevant Coursework: Robo Advisors and Systematic Trading, Fundamental Algorithms, Operating Systems, Foundations of Fintech

National Institute of Technology, Bhopal India
Bachelor of Technology, Computer Science and Engineering *July 2016 – June 2020*
Relevant Coursework: Data Structures, Algorithms Design, and Analysis, Statistics, Machine Learning, Software Engineering

Experience

Oracle, **Bengaluru, Karnataka, India**
Member Technical Staff *Jan 2022 – Aug 2024*

- Streamlined Test & Delivery: Established robust CI/CD pipelines for the ZRCV cloud service, enhancing reliability, scalability, and development efficiency while reducing manual testing efforts by 95%.
- Innovation & Stakeholder Engagement: Collaborated with cross-functional teams to implement parallelization techniques, cutting test execution time by ~80% and enabling timely delivery of critical features to internal clients.
- Resilient Infrastructure: Upgraded test infrastructure with fail-safe mechanisms and retry logic, improving true positive bug detection by ~90% and reducing production issues.
- Consultative Support: Provided technical insights and demos to internal teams, aligning solutions with evolving project requirements and showcasing best practices in cloud testing.

Incture Technologies, Bengaluru, Karnataka, India
Software Engineer *Sept 2020 – Dec 2021*

- Customer-Centric Backend Services: Developed scalable backend services using Spring MVC and Spring Boot, improving response times by ~70% and ensuring seamless user experiences.
- Automated Deployments: Deployed services on SAP Cloud Platform with zero manual interventions, reducing operational overhead and increasing release cadence.
- Technical Troubleshooting & Communication: Led root cause analyses for client-reported issues, leveraging advanced debugging techniques and clear documentation to reduce customer incidents by 85%.
- Cross-Functional Collaboration: Partnered with QA and product teams to gather feedback, present solutions, and ensure smooth end-to-end development cycles.

Skills

Technical/Programming: Java, Python, C++, SQL, Shell
Frameworks/Technologies: Spring, Hibernate, OCI, Machine Learning, Azure, Terraform, MySQL, React.js, Next.js
Tools: Git, TeamCity, Jenkins, Postman, Docker, Jira, Microsoft Office Suite, Google Slides and Docs
Soft/Consultative Skills: Stakeholder Engagement, Technical Demos, Presentation & Storytelling, Problem-Solving, Agile Dev

Projects

Real Time Healthcare System *Dec 2024*
Summary:
Delivered a robust, scalable healthcare platform providing actionable insights to healthcare providers and improving patient care through timely risk alerts.
Key Components and Skills:

- Enterprise Data Architecture (EDA): Designed a hybrid data model merging traditional relational databases with big data sources.
- Machine Learning Integration: Built a Python-based model to calculate patient risk factors from clinical notes, reports, and relational data; updated the Operational Data Store (ODS) in real time.
- Spring Boot & Azure SQL Backend: Implemented RESTful services and Thymeleaf templates for a user-friendly interface, ensuring seamless data flow between the application and ML module.
- Performance & Governance: Optimized queries, introduced caching, and adhered to data governance strategies (metadata management, bias prevention) for a secure and scalable environment.

Intrusion Detection System *June 2020*
Summary:
Designed a deterministic model using Extreme Learning Machines to detect emerging cyber threats. Optimized feature selection and model architecture, boosting detection rates of rare attacks and improving overall system effectiveness.
Key Components and Skills:

- Advanced ML Algorithms & Feature Engineering: Employed Extreme Learning Machines, ensemble classifiers (e.g., Random Forest, XGBoost), and cost-sensitive learning strategies to address imbalanced threat data.
- Continuous Model Training & Evaluation: Implemented a re-training pipeline triggered by new data, refining model precision on evolving threat landscapes (including zero-day vulnerabilities).
- Anomaly Detection & Ensemble Methods: Applied semi-supervised approaches for novel attack vectors, reducing reliance on purely signature-based detection.