

SIDDHESH SHINDE

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EDUCATION

Binghamton University, State University of New York

Binghamton, NY

Master of Science in Computer Science (Cumulative GPA: 3.67/4.00)

August 2021 - May 2023

Relevant Coursework: Design Patterns, Design and Analysis of Algorithms, Operating Systems, Data Mining, Data Privacy
Social Media Data Science Pipeline, Programming Languages, Computer Architecture and Organization, Computer Security

University of Mumbai

Mumbai, India

Bachelor of Engineering in Computer Engineering (CGPA: 7.31/10)

July 2015 - June 2019

Research Publication: Road Surveillance System, Journal of Applied Sciences and Computations, ISSN No: 1076-5131

TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, Go, C, C++, GraphQL, HTML, CSS, XML

Databases and Cloud: MySQL, MongoDB, PostgreSQL, SQLite, AWS, Docker, Kubernetes

Frameworks: Spring Boot, Hibernate, Hadoop, Spark, JUnit, Qiskit, Django, Bootstrap, JavaFX, MUI, Tailwind

Tools: Git, Maven, JIRA, Apache, Postman, Thymeleaf, IntelliJ IDEA, Eclipse, Visual Studio Code, Android Studio, Firebase, Anaconda

Other Skills: REST APIs, Java Persistence API, React.js, Microservices, JDBC, JWT, Spring Web and Security, NumPy, Pandas

Certifications: Intro to Quantum Computing with IBM Quantum, Java Masterclass, SQL Bootcamp, Python Masterclass

PROJECT EXPERIENCE

Microblogging Social Media Web Application ([Project link](#))

July 2023 - October 2023

- A full-stack web application mirroring Twitter's functionality using **Java 17**, **Spring**, **React.js**, **Tailwind CSS** and **MySQL**.
- Designed **REST APIs** for user signup, login, creating multimedia-rich posts. Implemented **CRUD** operations using REST, enabling users to perform **Social Interactions** (repost, like, reply, follow, view profiles, posts and liked posts for both self and other users) and **Profile Management** (update profile, delete posts).
- Leveraged **Redux** for state management, **formik** for form handling and **Material-UI** to design and enhance user interface.
- Utilized **Java Persistence API** for Object Relational Mapping and **Spring Security** with **JWT** for security and authentication.
- Ensured scalable, clean and robust code with **DAOs**, **DTOs**, **Model-View-Controller** architecture, logging and error handling.

Quantum Error Correction with Shor Code ([Project link](#))

January 2023 - April 2023

- Assembled encoding and correction quantum circuits for bit-flip and phase-flip errors in qubits using **Python 3** and **Qiskit's** quantum logic gates on **IBM Quantum Lab**, using superposition and entanglement properties.
- Constructed and visualized the Shor code circuit for error correction, and simulated the errors based on probabilities.
- Analyzed performance of Shor code and uncorrected qubits and visualized the results using **Matplotlib** based on state fidelity property of quantum states plotted against increasing probability of errors to verify the accuracy after Quantum state measurements.

Employee Management Web Application ([Project link](#))

December 2022 - January 2023

- Developed a real-time web application to manage employee details and perform CRUD operations, based on user's role/authorization, using Java 8 with **Spring Boot** and **Spring MVC**.
- Provided security with **JDBC** authentication and password hashing using **Spring Security** and Thymeleaf security.
- Used **MySQL** database, **Spring Data Java Persistence API** for ORM, and **Thymeleaf** to create Web UI.

Impact of 2022 US elections on social media ([Project Link](#))

September 2022 - November 2022

- Built a web scraper using **python** on **Jupyter** and collected 485k unique JSON objects on political data using **OAuth2**, **Reddit API**, **MongoDB** and cleansed the data.
- Conducted Topic Analysis, Sentiment and Emotion Analysis for 10 political topics, 3 sentiments and 8 emotions using **NRC Emotion Lexicon** and **VADER (Valence Aware Dictionary and sEntiment Reasoner)** libraries and constructed a model to predict emotion scores using **NumPy** and **TensorFlow**.
- Performed Data Visualization by plotting interactive graphs using **Bokeh** and **Matplotlib** libraries.

Customer Relationship Manager (CRM)

March 2022 - July 2022

- Developed **REST API** to implement real-time **CRUD** functionality in the CRM web application to manage customer data using **Java 8**, **Spring**, **MySQL** database.
- Implemented the Controller, Service and DAO layers by using **Hibernate** for object-relational mapping, **Jackson** for data binding and **Postman** as REST Client.

PROFESSIONAL EXPERIENCE

Binghamton University Dining Services (Sodexo), Assistant IT Manager

January 2022 - May 2023

- Managed and organized a database of 6000+ entries, including inventory items, recipes, menus, and invoices by utilizing Inventory Management software and Microsoft Office to perform data entry, analysis and reporting.
- Installed and configured various computer and electronic equipment, including cash register tablets, Point of Sale (POS) systems, desktop computers, networking devices in university dining halls.
- Maintained and troubleshooted the electronic equipment and IT operations to ensure uninterrupted service and minimize downtime.