

## SURABHI SINHA

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### OBJECTIVE

Seeking a challenging internship position in software development.

### EDUCATION

Masters, Software Engineering	San Jose State University	<b>Expected May 2020</b>
<i>Relevant Coursework:</i> Enterprise Distributed Systems, Web Programming, Enterprise Software Platforms.		
Bachelors, Information Technology	IET, Lucknow	<b>Jun 2010 – Jun 2014</b>
<i>Relevant Coursework:</i> Database Systems, Data Structures & Algorithms, Operating Systems.		

### TECHNICAL SKILLS

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|----------------------------|---|
| ▪ <b>Languages</b>         | Java (Core), JavaScript, HTML5, CSS, PL/SQL, XML, C   |
| ▪ <b>Frameworks</b>        | Node.js, React.js, Redux, Express.js, AWS, Passport.js, JMeter, Mocha, Twitter Bootstrap, Selenium, Apache Kafka, JWT |
| ▪ <b>Operating Systems</b> | Windows, Linux, Mac OS X  |
| ▪ <b>Databases</b>         | SQL Server 2005, Oracle 11g, MySQL, MongoDB, SQLite, DB2  |

### PROFESSIONAL EXPERIENCE

#### Tata Consultancy Services (Systems Engineer) **Sep 2014 – June 2018**

- Developed a scalable query caching system to optimize the response time of database queries.
- Automated the data validation process carried out during an Extract, Transform, Load (ETL) process involving various sources like PeopleSoft, SAP and Mainframe Application.
- Developed an Extract, Transform, Load (ETL) batch job to enrich ecommerce catalog for a US based pharmacy.
- Automated various daily, weekly and monthly business operations and reporting processes to reduce human efforts.
- Applied advance database techniques like index based query optimization, stored procedure execution and schema design using entity relationship diagram (ERD).

#### Prototype of HomeAway **Aug 2018 – Sep 2018**

- Developed a scalable platform for property owners to post their properties for renting purposes using MERN stack.
- Implemented reporting dashboards and business intelligence using react-chartjs-2.js to monitor listed properties and their bookings and to derive insights from recorded activities.
- Persisted transaction and booking data in MySQL and rich property data in MongoDB.
- Used Apache Kafka for near real-time ingestion of user activities event data in background processing jobs.

#### Prototype of Dropbox **Aug 2018 – Sep 2018**

- Developed server architecture and RESTful APIs to create personal user space for managing data on server.
- Used MySQL in backend and designed the database schema using entity relationship diagram (ERD) principles.
- Implemented REST API endpoints using Express framework and built the frontend using React.js and Redux.
- Improved server throughput by implementing Kafka based distributed publish-subscribe messaging system.
- Used JMeter for load testing and Mocha for integration testing.

#### Connection Pooling **Aug 2018 – Sep 2018**

- Developed a JavaScript connection pooling library to reuse connections and improve application performance.
- Used synchronization primitives like counting semaphores to control access to the connection pool.

#### Online Voting System **Aug 2013 – May 2014**

- Used MySQL for database persistence, JSP/Servlets/HTML for implementing the web tier and Core Java for the business logic.
- Added workflows for user registration, timed voting and statistical analysis of the results.

#### Fingerprint Recognition System **Aug 2013 – May 2014**

- Implemented a fingerprint recognition system for authenticity testing using the concepts of Data Image Processing, Minutiae matching algorithm.
- Used MATLAB programming language to implement the system.
- Used MySQL to store the fingerprints of authentic students.
- The system is being used by the college to validate student's authenticity during examinations.

#### Online Judge System **Aug 2012 – May 2013**

- Designed an online judge system using MySQL database for storing the submitted programs and Redis's publish-subscribe paradigm for tracking submissions.
  - Built an asynchronous job dispatching system to evaluate submissions, backed by distributed EC2 worker instances.
  - The platform was used to conduct the programming contest 'Beat the Byte' in college's technical symposium.
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