SHANTANOO SINHA

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EDUCATION

Master of Science – Computer Science	Illinois Institute of Technology, Chicago	3.3	August 2019 – May 2021
Bachelor of Technology – Information Technology	Gautam Buddh Technical University, India	3.0	August 2007 – July 2011

TECHNICAL SKILLS

Language & Database: Java, J2EE, SQL, Python, C, Shell scripting | Oracle, MSSQL, MySQL
Framework: Spring Boot, JPA, Hibernate, Struts, REST API, Hazelcast
Analytics: Hadoop, MapReduce, Spark, HDFS, YARN, Pig, Hive, Pandas, NumPy, Sklearn
Frontend: Angular 6, JavaScript, jQuery, Typescript, Bootstrap, HTML, CSS, JSON, XML, AJAX, Firebug
Tools & Repository: Eclipse, Visual Studio, Jupyter Notebook | Puppet, GitLab CI/CD, Jenkins, Docker, Maven, Ant | Git, SVN | Jira
Code Review: SonarQube, PMD | **ETL Tools:** IHS Markit EDM (CADIS) | **Development Methodologies:** Agile, Waterfall

WORK EXPERIENCE

Student Assistant — **Illinois Institute of Technology,** Chicago, USA — September 2019 – Present

- Providing technical assistance to students, faculty, staff, tenants, guests, and visitors with the campus technologies
- Troubleshooting software applications, computers, mobile devices, printers, phones AV, printer & plotter issues

Software Engineer — **IHS Markit**, Noida, India — July 2015 – August 2019

- Implemented a framework in Java for parsing, validation and co-mingling of data to create the golden copy of reference data
- Created microservices based architecture using Java, SpringBoot, Hibernate for the distribution of reference data to clients
- Upgraded the command line application in Java, Groovy & HTMLUnit API to web-scrape & download 1000+ monthly trustee reports
- Remodeled a new and responsive UI for Entity Data using Angular 6, Material UI, Typescript, JavaScript & Bootstrap
- Improved Hazelcast in-memory caching implementation resulting in reduced downtime & increased application's stability by 40%
- Automated the build and deployment by creating generic fully automated Jenkins & GitLab CI/CD pipelines and Docker
- Reduced the application deployment time up to 80% by writing Puppet manifests for 50+ Reference Data projects
- Recognized with 'Star Award' & 'Most Valuable Player' award for top performance across the organization

Software Engineer — **Tata Consultancy Services**, India — December 2011 – July 2015

- Supervised technical direction, mentoring and training for a team of 8 developers
- Developed timesheet entry and claim & reimbursement end-to-end web modules using Java, jQuery, JavaScript, Struts & MySQL
- Modeled a framework in Java to move the static master data from database to JSON files thus reducing load on the database
- Analyzed and optimized complex slow running SQL queries, improving efficiency by 30%
- Designed a web portal in Java & integrated with Ataccama Data Quality (ETL) to extend its ability to generate on-demand reports
- Upgraded the application's JDK from 1.4 to 1.7 by recompiling and re-writing the deprecated and non-compatible functionalities
- Awarded 'Star of the Learner's Group' award in a batch of 40 ILP trainees

Software Developer Intern — **Sahara India Limited**, Lucknow, India — July 2010 – August 2010

Online Letter Processing System (ASP.Net, C#, MS SQL, Visual Studio)

- Coded a web application to store, forward & review the official documents electronically and automate the management of letters
- Programmed the archival process and created a daily end-of-day batch job to archive the old data and files

ACADEMIC PROJECTS

Napster Style Peer to Peer File Sharing (Java 8, RMI, Eclipse, Git, Linux) Source Code — January 2020 – February 2020

- Created a small Napster style peer to peer file sharing application in Java using RMI and multithreading
- Programmed a central Index server which registers peer client nodes & maintains an index of available files and their location

Gnutella Style Peer to Peer File Sharing (Java 8, RMI, Eclipse, Git, Vagrant, Fedora) Source Code — March 2020 – May 2020

- Extended the Napster P2P application to a decentralized Gnutella style P2P file sharing application for linear & all-to-all topologies
- Implemented asymmetric cryptography (RSA) to encrypt network traffic & file consistency mechanism for Push & Pull designs

Bigdata Analysis of Yelp Dataset (Hadoop, Spark, Hive, Pig, Python, Tableau) Source Code — April 2020 – May 2020

- Analyzed Yelp dataset by creating a data pipeline in Hadoop, performed transformations using Spark & Pig and visualized the results using Tableau dashboards

Database Management System (C, Visual Studio, Git, Linux) Source Code — August 2019 – December 2019

- Implemented a small Database Management System in C with a disk-based B+ tree index structure and Buffer Pool implementation

Artificial Intelligence (Python, Jupyter Notebook, Git) Source Code — August 2019 – December 2019

- Programmed a TicTacToe board analyzer in Python by implementing Alpha-beta pruning & Minimax algorithms

OTHER PROJECTS

Car Parking System (Java, Spring Boot, Hibernate, Angular 6+, LDAP, Eclipse, Git, Linux) — September 2018 – November 2018

- Automated the monthly car parking allocation process with a lottery-based application (IHS Markit inhouse) integrated with LDAP