

Kuldeep Singh Rathor

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Summary

Charged up about **Full Stack Development**, I bring along 4.5 years of professional software development experience in Java, Spring, databases and modern web technologies. I am also working in Machine Learning and Artificial Intelligence. Seeking internship Summer'19.

Education

Master of Science, Computer Science Arizona State University **3.78/4.0** December'19

Relevant Courses - Data Mining, Distributed Databases System, Artificial Intelligence.

Bachelor of Technology, Computer Science Gurukula Kangri University 75.06/100 August'08 - June'12

Technical Skills

Languages : Python, Java, SQL, JavaScript, HTML, CSS, XSLT
DBs and Tools : MySQL, Cassandra, Postgres, MongoDB, IBM DB2, Git, Jira, Jenkins, SonarCube, SVN, Jenkins
Technologies : Machine Learning, Spring Framework, Apache Spark, Spring Boot, RESTful Webservices, SOA
Libraries : NumPy, NetworkX, Panda, Jackson Json, Maven, Mockito, JUnit

Professional Experience

Data Science Lab, ASU: Research Associate Tempe, USA | Oct'18 – Present

- Developing techniques for Moon Craters' Classification which will further aid in Space Mission to Moon.
- Working on Nuclear Documents classification and analysis for Nuclear Power Plants using Natural Language Processing.
- Constructing organizational Network taxonomy from Nuclear operation records using Python and NetworkX and visualize them.

Cognizant: Software Engineer

Pune, India | Mar'16 – Dec'17

- Revamped client UBS's highly critical wealth management portfolio's functionality (facilitated by RESTful APIs in Java) which enabled UBS Financial Advisors to make better decisions for lending and cash management solutions.
- Facilitated the seamless integration with data sources by developing more than 10 REST APIs (Using Spring REST, Spring Boot and Data) in the portfolio for requirements like assets, liabilities and mortgage information.
- Improved read/write operations rate by implementing Spark's cluster computing capabilities with Cassandra DB to handle data in GBs. Incorporated SQL queries into Java Code for processing business logic on data.
- Employed Agile (Continuous Integration) using Jenkins. Performed QA using JUnit and Mockito with test coverage > 95%.

IBM: Full Stack Developer

Pune, India | Dec'12- Mar'16

- Received **Eminence & Excellence** award for single handedly managing both front (improved UI using HTML, JavaScript) and back-end development (Java, DB2 and integration of optimized SQL queries) of core applications which managed employees and their training.
- Enhanced the code in production to tackle frequent bugs which further reduced incidents by 70%
- Mentored junior team members to assimilate them into the project work quickly and reduced unproductive timespan.

Projects

Hot cell analysis on NYC Taxi Trip datasets: (Distributed Systems, Team of 4, Java, Scala, Spark, Hadoop)

- Designed and developed a distributed algorithm for identifying most significant hot spot cells from a spatio-temporal data of New York City Yellow Cab taxi trip records spanning January 2009 to June 2015 using Getis-Ord statistic.
- Deployed Apache Spark cluster and Hadoop system for distributed and parallel data processing.

Gesture Recognition for American Sign Language (Data Mining, Team of 4, Tools: Matlab)

- Collected raw data by performing ASL gestures and trained a model on cleaned data to recognize the sign gesture.
- Used 5 Feature extraction methods (Mean, Variance, Root Mean Square Standard Deviation, Fourier Transform)
- Implemented a binary classifier which employed machine learning models viz. Support Vector Machine, Decision Tree and Neural Network and we got 99% accuracy in each model.

Semantic Search on Movie Database: (Natural Language Processing, Team of 4, Tools: Word2vec, FastText)

- Developed a Natural Language Processing based system which finds movie name based on user's query by understanding its semantics, not keywords and achieved 80% accuracy.
- Cleaned the Data collected from IMDb and performed Coreference Resolution, POS tagging and lemmatization.
- Leveraged NLTK, K-Parser, Sent2Vec respectively for Event encoding, Named Entity Encoding and sentence encoding.

A cooperative game framework based on Reinforcement Learning: (Team of 2, Python, RL)

- Designed and developed a cooperative agent which acts keeping its human companion's play into consideration.
- Introduced a cooperative PACBOT for PACMAN game which helps PACMAN to achieve as many points possible using Reinforcement Learning.