#### Surinder Sokhal

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# Education

# Northeastern University, Boston, MA

Masters in College of Computer and Information Science

Expected Graduation: Dec. 2016 GPA: 3.73/4.0

Related Courses: Data Mining, Parallel Data processing in Map Reduce, Fundamentals of Artificial Intelligence,

Algorithms, Information Retrieval, Programming Design Paradigm

# Guru Nanak Dev University, Amritsar, India

Aug. 2009 - May 2013

Bachelor of Technology in Computer Science and Technology

Related Courses: Data Structures, Programming in Java, Operating System, Database System Management

# **Technical Skills**

Languages: Java, Python, Racket, Android, R (basics), Shell Scripting(basics), Velocity Engine

Web Technologies: HTML5, CSS (basics), JavaScript (learning)
Big Data Technologies: Hadoop, HDFS, HBase (Basics), PigLatin (basics)

**Databases:** MySQL, Oracle10g

**Networking:** {TCP/IP, HTTP, OSI Model} (Basics) **Business Intelligent Tools:** Informatica, Business Objects

IDE's and Tools: Android Studio, Elastic Search (beginner), NetBeans, Eclipse, IntelliJ

Source Control: SVN, Git

# **Work Experience**

# Nok Nok Labs, Palo Alto, California - Software Engineer Intern

May 2015 – Dec. 2015

#### **Project: Automate Test Harness Android Application (Android)**

- Enhanced a custom test harness Android app for Nok Nok Labs S3 authentication product line
- Worked in all phases of SDLC (Software development life cycle) in an Agile driven environment
- Enhancements included automatic unattended test execution, parameterization of test cases, and validation
- Worked in close cooperation with Supervisor and other team members to forma team effort in development
- Coordinated with Testing team to fix defects discovered as a result of automatic testing

# **Tata Consultancy Services (TCS), Gurgaon, India -** Assistant Software Engineer Trainee **Project: Report Generating Tool (Innovation Labs)**

Sept. 2013 – July 2014

- Developed automated scripts using Java Standard libraries and Weka for generating reports
- Automation included computation of Confusion Matrix, Confidence and Support of associative rules for given datasets
- Enhanced automation script to compare and plot test results for different parameter values

# **Academic Projects**

#### Six degree of Separation in Map Reduce

Sept. 2015 – Dec. 2015

- Implemented Breadth First Search (BFS) in Map Reduce using EMR, EC2 and S3 on AWS (Amazon Web Services) on twitter dataset of 2 million records
- Cleaned and preprocessed twitter data to build adjacency matrix for representing graph
- · Implemented sequential run of Map-Reduce jobs to explore discovered nodes at each level
- Proved the claim for "Six degree of Separation" on randomly generated Source and destination vertex

#### Inverted Indexing and Page Ranking in Java, HMTL5 and CSS

Jan. 2015 – May 2015

- Implemented multi-threaded web crawler for topic based query to collect and build an Inverted Index on the crawled pages
- Eliminated frequently occurring words using "Stopping Word List" and used "lucene-snowball.jar" for stemming.
- Implemented various ranking models like TF-IDF, LM with Laplace Smoothing and others to rank the crawled data and hyper-links based on the requested queries
- Developed GUI for for displaying the top ranked pages

#### Pac-Man project in Python

Sept. 2014 – Dec. 2014

- Implemented graph search algorithms like A\*, BFS (Breadth First Search), Min-Max Algorithm and Alpha-Beta Pruning to help pacman find path in the maze
- Implemented Q-Learning, Reinforcement learning, Bayes Net, Laplace Smoothing to help Pac-Man to train pacman