

# NAVEEN NATARAJAN

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## PROFESSIONAL EXPERIENCE

### IMS Health

June 2015 - Present

**Position:** Software Engineer – Big Data

- Designed and architected a scalable and reliable system to gather data from various social platforms.
- Built the system using tools like Hadoop, Nutch, Solr, Kafka, Storm, Cassandra, Flume and MySQL.
- Wrote map reduce jobs to gather data and perform various tasks.
- Built a data api layer to retrieve data from the system.
- Built an archival system to archive the old data.
- Developed proof of concept using Hive and Spark for analyzing the archived data.
- Deployed and maintained the cluster on Amazon Web Services.

### Dow Jones

July 2013 - June 2015

**Position:** Application Developer

- Develop and update the existing customer self-service site that is used by all the WSJ & Barron's customers.
- Built a fault-tolerant abstraction layer that would handle request from all the customer service systems.
- Built a coupon manager system using Django.
- Developed an encryption and decryption algorithm in Java for storing documents in Nuxeo.
- Built many proof of concepts using Python, NodeJS and Java.

### Children's Hospital of Philadelphia (CHOP)

June - Aug 2012

**Position:** Database Developer Intern

- Twelve weeks of summer internship in the Database Services Team as a Database Administrator.
- Worked on Oracle, Microsoft SQL Server and Epic Cache Databases.

## TECHNICAL SKILLS

- **Languages:** Java, Python
- **Big Data Tools:** Hadoop, Kafka, Storm, Flume, Solr, Spark, Sqoop
- **Databases:** NoSQL(Cassandra, Hive), Relational(MySQL, PostgreSQL)
- **Frameworks:** Map Reduce, Amazon Web Services, Spring, Hibernate, Django
- **Technologies:** Git, Jenkins, HUE, Oozie, Eclipse, Query Optimization, ETL, Web Robots
- **Operating Systems:** Linux, Windows

## EDUCATION

### Johns Hopkins University, Baltimore, Maryland

Aug 2011 - May 2013

- Master of Science & Engineering in Computer Science (MSE)

### Anna University, India

Aug 2007 - Apr 2011

- Bachelor of Technology in Information Technology (B.Tech)

## PROJECTS

### Nexus Social Big Data Search Platform

**Technology Used:** Java, Hadoop, Flume, Nutch, Solr, Cassandra, Storm, Kafka, AWS, MySQL

Designed, architected and built a system to gather data from various social media platforms like Twitter, Facebook, news sites, blogs, forums, etc. The system is designed to be reliable, scalable and fault tolerant. Wrote multiple map reduce jobs to gather data, clean it, tag the data based on the keywords and write it to Cassandra. The data in Cassandra is indexed by Solr so it could be searched. The data is analyzed, useful and relevant information is displayed on the dashboard based on the keyword searched by the user.

#### Data API Layer

**Technology Used:** Java, PHP, Solr

Wrote a data api layer to retrieve data from the existing search platform. This can be used by other teams or users to retrieve data from the search platform or add new keywords or url's or pages to be searched by the search platform. The data would be returned in JSON format.

#### Archiving Old Data

**Technology Used:** Java, HDFS, Hadoop, Solr, Cassandra

Used map reduce jobs to read data from Cassandra and write it to HDFS for archival. Developed proof of concepts to analyze the data using Hive or Spark and index it using Solr.

#### Coupon Management System

**Technology Used:** Python, Django, Mysql, Nginx, AWS

Developed a coupon management system web portal for the circulation team, which is used to manage corporate coupon codes for WSJ and Barron's subscriptions. Prior to this excel sheets were used to manually manage the coupons.

#### Abstraction Layer

**Technology Used:** Python, Django, Postgres

Designed and developed an abstraction layer that handles all the calls made to the customer service systems. It is designed to be fault tolerant and also tolerant with respect to changes in contract between systems. This simplified the maintenance and development of the customer service systems.