

# Russi Chatterjee

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## Short

- Data Scientist and Engineer with ~ 8 years exp.
- Experience in Ad-tech, healthcare, linguistics, social networks, IOT and embedded systems.
- Blend of data science and engineering experience.
- Held leadership roles for > 4 years.

## Stack

- **Languages:** Scala, Python, bash
- **ML toolkit:** scikit-learn, scikit-image, networkx, pytorch, pymc3, pandas, numpy, scipy, CoreNLP, KenLM, openIE, ML-LIB
- **Big data:** Spark, presto, hive, storm, AWS EMR, Athena, Glue catalog
- **Databases:** cassandra, elasticsearch, mongo, postgres / postGIS
- **Others:** jupyter, atlassian suite, devops tools, etc

## Experience

### 1. Senior Data Scientist, Lifesight.io

#### Geo-location ad analytics (05-2018 - present)

- Lead the data science team.
- Worked on various ML models on classification and clustering.
- Worked on data engineering jobs for geospatial problems.
- Architected various components of the big data stack.
- Planning, tracking, brainstorming and managing tasks.
- Processed petabyte-scale data.

## 2. Data Scientist, Reverie

Creating an NLP stack for Indian languages (07-2016 – 08-2017)

- Individual contributor role amongst a team of researchers.
- Worked on:
  1. cross-linguistic information retrieval
  2. neural transliteration
  3. language models
  4. queryable knowledgebase

## 3. Data Scientist, Practo

India's largest healthcare platform (05-2015 – 07-2016)

- Lead the search team.
- Conceptualized, architected and executed "Cerebro", the search engine that powers [practo.com](https://practo.com).
- Authored the doctor ranking algorithm
- Involved in various data science tasks across verticals.

## 4. Senior Software Engineer, on contract, Showt

Real-time public opinion network (07-2014 – 01-2015)

- Data engineering role.
- Involved designing distributed systems at a scale of 20k QPS.

## 5. Senior Software Engineer, MagnetWorks

Analytics and monitoring for process industries (08-2013 – 06-2014)

- IOT analytics product for heavy industries.
- Extremely hands-on, full-stack developer role.

## 6. Software Engineer, Toshiba

Real-time operating systems (02-2013 – 08-2013)

- Worked with the microkernel core OS team, Japan.

## 7. Software Engineer, Wipro

Automotive Electronics (02-2011 – 02-2013)

- Linux kernel device driver developer.

# Opensource

- **Deep Learning**

- `pytorch-dnc` : Differential Neural Computers, Sparse Access Memory and Sparse Differentiable Neural Computers.
- `pytorch-dni` : Implementation of Deepmind's "Decoupled Neural Interfaces Using Synthetic Gradients".
- `subLSTM` : Implementation of subLSTMs from the paper "Cortical microcircuits as gated-recurrent neural networks".

- **Computational Neuroscience**

- `Spectrum` : Higher-order spectrum estimation toolkit, for analysing EEG recordings
- `Cortical Microcircuit` : Implementation of a model of a cortical microcircuit (a 1mm<sup>2</sup> of the human brain), in pyNEST, from the paper "The cell-type specific cortical microcircuit: relating structure and activity in a full-scale spiking network model."
- `S-transform` : The Stockwell transform.

- **Mathematics**

`monoid.space`, a book on learning how to "implement" a few math theories.

# Education

- B-Tech., Computer Science, `NIT, Rourkela` – 2006–2010