

RAJARSHI CHATTOPADHYAY

I am a Software Engineer having 4 years experience: internship on web application development, permanent job on application development and support¹, personal and academic projects on applied machine learning and Big Data management and analysis², and self-learned system design fundamentals.

As a Big Data enthusiast, I have undertaken online training earning digital badges³ on Big Data technologies to stay relevant. I also take interest in designing highly scalable intelligent systems.

Currently searching for a software engineer position that allows me to develop and improve software and build intelligent systems to positively impact the global community.



EDUCATION

2020
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2018

- **M.S. in Computer Science, Intelligent Systems**
University of Texas at Dallas 📍 Dallas, TX, USA
 - Data Structures, Big Data, Machine Learning
 - Specialization: Intelligent Systems

2014
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2012

- **B.Tech. in Electronics**
West Bengal University of Technology 📍 Kolkata, WB, India
 - Object Oriented Programming, Embedded Systems, Microprocessors, Digital Electronics
 - Thesis: Design and Development of a RISC Processor based on Harvard Architecture

PROFESSIONAL EXPERIENCE

2019

- **Software Engineer Intern, IT**
Tesla 📍 Fremont, CA, USA
 - Infrastructure automation: Automated infrastructure access requests and brought down the turnaround time by 90%.

2019

- **Software Development Engineer Intern**
Copart 📍 Dallas, TX, USA
 - Developed and maintained web application modules and REST microservices for billing and payments operations.

2019
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2018

- **Administrative Assistant, Student-worker**
Office of Graduate Education, UT Dallas 📍 Dallas, TX, USA
 - Developed template to aid faster review of dissertation documents. Performed data maintenance, workshop arrangements and social media engagement.

View this CV online at
likarajo.github.io/cv

View my resume online at
likarajo.github.io/cv/resume

CONTACT

- ✉ likarajo@gmail.com
- 👤 linkedin.com/in/likarajo
- 🌐 github.com/likarajo
- 🔗 likarajo.github.io
- 📞 (469) 380-2696

TECHNICAL SKILLS

Lang: Java, Python, Scala
Web: Spring, Spring Boot
Big Data: Hadoop, Spark
DevOps: Git, Jenkins, Docker
Database: SQL, NoSQL
Front End: HTML/CSS/JavaScript
Cloud: AWS S3 EC2 EMR, Elastic

2018 2014	<ul style="list-style-type: none"> ● Software Systems Engineer IBM 📍 Kolkata, WB, India <ul style="list-style-type: none"> • Developed and maintained client application back-end. Automated DB updates and app-queue monitoring. Received IBM Best Emerging Techie Award in 2016.
2013 2012	<ul style="list-style-type: none"> ● Embedded Systems Engineer Apprentice Hi-Q Solutions 📍 Kolkata, WB, India <ul style="list-style-type: none"> • Developed embedded solutions using Finite State Machines, Assembly Language, and VHDL.
2013	<ul style="list-style-type: none"> ● Associate Engineer Apprentice Bharat Sanchar Nigam Ltd. 📍 Kolkata, WB, India <ul style="list-style-type: none"> • Analyzed requirement and designed a college campus network for an Institution. • Rank first with 96.95% score in Vocational Training on Communication Systems.
2013 2012	<ul style="list-style-type: none"> ● Associate Engineer Apprentice Siemens VAI Metal Technologies 📍 Kolkata, WB, India <ul style="list-style-type: none"> • Prepared hook-up diagrams for installation of automation instruments at client factory location. • Prepared container diagrams for holding instruments using CAD

↗ PROJECTS

2019	<ul style="list-style-type: none"> ● Twitter Sentiments Academic 📍 University of Texas at Dallas <ul style="list-style-type: none"> • A Spark Streaming application for live tweets sentiment analysis. <p>Tech/Skills: <i>Scala, SBT, Spark, Twitter API, Zookeeper, Kafka, Elastic-Search, Logstash, Kibana</i></p> <p>Repo: github.com/likarajo/twitter_sentiments</p> <p>Link: likarajo.github.io/twitter_sentiments</p> 	<p>I have developed multiple side projects on various technologies based on the knowledge gained through academic course work and personal effort</p> <p>Have a look at my projects here:</p> <p> 🔗 github.com/likarajo 🔗 likarajo.github.io/Projects </p>
2019	<ul style="list-style-type: none"> ● House Price Prediction Academic 📍 University of Texas at Dallas <ul style="list-style-type: none"> • Analyzing house price data from Kaggle and building a model using the data which can be used to predict the final price of a house. <p>Tech/Skills: <i>Python, Feature-engineering, AWS S3 EC2 EMR, Spark, Scala, Regression</i></p> <p>Repo: github.com/likarajo/house_price</p> <p>Link: likarajo.github.io/house_price</p> 	

2019

● **Face recognition**

Personal

- Image recording, preparing image data, and training with pre-built Haar-cascade classifier to recognize face.

Tech/Skills: *numpy, cv2, python, Haar-cascade classifier*

Repo: github.com/likarajo/face_recognition

Link: likarajo.github.io/face_recognition

2019

● **Chatbot**

Personal

- A chat bot designed to simulate conversation with users base on Artificial Intelligence.

Tech/Skills: *AI, AIML, Python, Flask*

Repo: github.com/likarajo/chatbot

Link: *N/A*

2020

● **Sentiment of Movie Review**

Personal

- Deep Learning model built with neural networks (NN, CNN, RNN) using pretrained GloVe word embeddings from Stanford Core NLP to predict the sentiment of a movie review

Tech/Skills: *Python3, NLP, Deep learning, Neural Networks, Keras, tensorflow, Scikit-learn, Stanford Core NLP GloVe*

Repo: github.com/likarajo/movie_sentiment

Link: *N/A*

2019

● **CV**

Personal

- My Curriculum Vitae

Tech/Skills: *R, Markdown, Pagedown*

Repo: github.com/likarajo/cv

Link: likarajo.github.io/cv

2017

● **Kinship**

Personal

- A tool that finds out what are the related words (kins) to a particular word that twitter users have tweeted.

Tech/Skills: *Python3, Twitter API, Tkinter*

Repo: github.com/likarajo/kinship

Link: likarajo.github.io/kinship

- 2019 ● **Personal Website V3**
Personal
 - Version 3 of my portfolio website.Tech/Skills: *JS, Gatsby, Netlify, GitHub-Pages*
Repo: github.com/likarajo/website
Link: likarajo.github.io
- 2019 ● **Movie Search**
Academic  University of Texas at Dallas
 - Movies Search based on self-implemented TF-IDF values and Cosine-Similarity computed using movie plot summaries data taken from CMU Movie Summary Corpus.Tech/Skills: *Spark, Scala, TF-IDF, Cosine-Similarity*
Repo: github.com/likarajo/MovieSearch
Link: *N/A*
- 2019 ● **Airport Rank**
Academic  University of Texas at Dallas
 - Rank top airports based on self-implemented Page Rank values computed using their connections data from Bureau of Transportation Statistics.Tech/Skills: *Spark, Scala, Page rank*
Repo: github.com/likarajo/AirportRank
Link: *N/A*
- 2019 ● **News Topic Modelling**
Academic  University of Texas at Dallas
 - Find out topic of news from CNN news dataTech/Skills: *Spark, Scala, Latent-Dirichlet-Allocation*
Repo: github.com/likarajo/topics
Link: *N/A*
- 2019 ● **Text to Number**
Personal  Project
 - Implementation of Text Vectorization methods - Bag-of-words, TF-IDF, NgramsTech/Skills: *Python3, Scikit-learn, nltk, Bag-of-words, TF-IDF, Ngrams*
Repo: github.com/likarajo/text2number
Link: *N/A*

- 2019
- **Portfolio**
Personal
 - My portfolio websiteTech/Skills: *R, Blogdown*
Repo: github.com/likarajo/Projects
Link: likarajo.github.io/Projects
- 2019
- **Social Network Analysis**
Academic  University of Texas at Dallas
 - Analysing a social network of users liking each other's posts created in a graph structure.Tech/Skills: *Spark, Scala, GraphX*
Repo: github.com/likarajo/social_network
Link: *N/A*
- 2019
- **Crimes Analysis**
Academic  University of Texas at Dallas
 - Finding the crimes cluster in a region using Kmeans clustering as silhouette.Tech/Skills: *Spark, Scala, Kmeans-clustering*
Repo: github.com/likarajo/crimes
Link: *N/A*
- 2019
- **Car Analysis**
Academic  University of Texas at Dallas
 - Classify cars as automatic or manual.
 - Predict mileage of cars.Tech/Skills: *Spark, Scala, Support-Vector-Classifier, Decision-Tree, Logistic-regression, Linear-Regression*
Repo: github.com/likarajo/car_analysis
Link: *N/A*
- 2019
- **Sentiment on US Airline**
Academic  University of Texas at Dallas
 - Analyzing sentiment on US Airlines with Logistic Regression, Random Forest classifier, Naive-Bayes classifier using tweets data on US Airline.Tech/Skills: *Scala, Spark, Classification*
Repo: github.com/likarajo/usairline_sentiment
Link: *N/A*

2019

● **Sentiment of a sentence**

Academic

📍 University of Texas at Dallas

- Used dataset of labelled sentences from Yelp, Amazon, IMDB to learn a model and use the same to analyze the sentiment of new sentences.

Tech/Skills: *Scala, TF-IDF, Classification*

Repo: github.com/lilikarajo/sentence_sentiment

Link: *N/A*

2019

● **Earthquakes**

Personal

- Fetch data from USGS and plot areas across the world that had a 4.5+ earthquake in the last 24 hours.

Tech/Skills: *Python, Basemap, Conda*

Repo: github.com/lilikarajo/earthquakes

Link: *N/A*

2019

● **Temperature Anomaly**

Personal

- Fetch data from NASA and plot regions on map that are fire hazards with high temperature anomaly.

Tech/Skills: *Python, Basemap, Conda*

Repo: github.com/lilikarajo/hightemp

Link: *N/A*

2019

● **Recommender System**

Academic

📍 University of Texas at Dallas

- A recommender systems built using Collaborative filtering on ratings data.
- Used Alternating least squares (ALS) algorithm to learn the latent factors.

Tech/Skills: *Scala, Spark, Collaborative-Filtering, Alternating-Least-Squares-Algorithm, Latent-factors*

Repo: github.com/lilikarajo/recommender

Link: *N/A*

2019

● **Dimensionality Reduction**

Academic

📍 University of Texas at Dallas

- Built a Support Vector Machine (SVM) Classifier model with Stochastic Gradient Decent (SGD) for Principal Component Analysis and Spectral Clustering.

Tech/Skills: *Python3, SVM-Classifier, Principal-Component-Analysis, Spectral-Clustering*

Repo: github.com/likarajo/dimensionality_reduction

Link: N/A

2019

● **Ensemble Methods**

Academic

📍 University of Texas at Dallas

- Self-implementation of Bagging and Boosting on Decision Tree ID3 algorithm.
- Comparing it with Scikit Learn implementation using Mushroom Data Set.

Tech/Skills: *Python3, Decision-Tree, ID3, Bagging, Boosting, Scikit-Learn*

Repo: github.com/likarajo/decision_tree_ensemble

Link: N/A

2019

● **Decision Tree ID3**

Academic

📍 University of Texas at Dallas

- Self-implementation of Decision Tree ID3 algorithm.
- Comparing it with Scikit Learn implementation using MONK's Problems and Tic-Tac-Toe Endgame Data Set.

Tech/Skills: *Python3, Decision-Tree, ID3, Scikit-Learn*

Repo: github.com/likarajo/decision_tree

Link: N/A

2019

● **Breast Cancer Diagnosis**

Academic

📍 University of Texas at Dallas

- Model built for diagnosing and predicting Breast Cancer with Support Vector Machine using Wisconsin Breast Cancer diagnostic data set.

Tech/Skills: *Python, Scikit-Learn, Support-Vector-Classifier*

Repo: github.com/likarajo/breastcancer_diagnosis

Link: N/A

- 2019
- **Titanic Survival**
Personal
 - Titanic survival prediction with Decision Tree classifier using dataset from Kaggle Competition.Tech/Skills: *Spark, Scala, Decision-Tree-Classifier*
Repo: github.com/likarajo/titanic_survival
Link: N/A
- 2019
- **Personal Website V2**
Personal
 - Version 2 of my portfolio website.Tech/Skills: *HTML, CSS, Bootstrap, JS, jQuery, GitHub-Pages*
Repo: github.com/likarajo/website_v2
Link: likarajo.github.io/website_v2
- 2018
- **Personal Website V1**
Personal
 - My first portfolio website.Tech/Skills: *HTML, CSS, Bootstrap, JS, jQuery, GitHub-Pages*
Repo: github.com/likarajo/website_v1
Link: likarajo.github.io/website_v1
- 2019
- **Tetris Game**
Academic  University of Texas at Dallas
 - A tetris UI game built as part of Computer Graphics curriculum.Tech/Skills: *Java, AWT, Swing*
Repo: github.com/likarajo/tetris
Link: N/A
- 2019
- **Simulated OS with Demand Paging**
Academic  University of Texas at Dallas
 - Simulated a computer system and implement a simple Operating System with simulated virtual memory demand paging scheme.Tech/Skills: *C++, Unix*
Repo: github.com/likarajo/simOS_demandPaging
Link: N/A

2019	<ul style="list-style-type: none"> Simulated OS Academic <div style="float: right;">  University of Texas at Dallas </div> <ul style="list-style-type: none"> Simulated a computer system and implement a simple Operating System that manages the resources of the computer system. <p>Tech/Skills: <i>C++, Unix</i></p> <p>Repo: github.com/likarajo/simOS</p> <p>Link: <i>N/A</i></p>
2018	<ul style="list-style-type: none"> CICD Personal <ul style="list-style-type: none"> Continuous Integration and continuous deployment using Jenkins. <p>Tech/Skills: <i>Jenkins, DevOps</i></p> <p>Repo: github.com/likarajo/devops-helloworld</p> <p>Link: likarajo.github.io/devops-helloworld</p>
2018	<ul style="list-style-type: none"> 911Calls Personal <ul style="list-style-type: none"> Data Science and visualization on 911 calls data. <p>Tech/Skills: <i>Python3</i></p> <p>Repo: github.com/likarajo/ds911calls</p> <p>Link: <i>N/A</i></p>
2015	<ul style="list-style-type: none"> MQ Reporting Tools Professional <div style="float: right;">  IBM </div> <ul style="list-style-type: none"> Developed a Java UI for daily queue status report generation for the core application on a single click eliminating manual effort. <p>Tech/Skills: <i>Java, SWT, Unix, Bash</i></p> <p>Repo: github.com/likarajo/mqreporting</p> <p>Link: <i>N/A</i></p>
2015	<ul style="list-style-type: none"> MQ Statistics Tools Professional <div style="float: right;">  IBM </div> <ul style="list-style-type: none"> Automated daily queue status monitoring and reporting for the core application eliminating manual effort. <p>Tech/Skills: <i>Unix, Bash</i></p> <p>Repo: github.com/likarajo/mqstats</p> <p>Link: <i>N/A</i></p>

2017

- **Rock Paper Scissor game**

Personal

- A One-player rock paper scissor game built using Python

Tech/Skills: *Python3, Tkinter*

Repo: github.com/likarajo/rock-paper-scissor

Link: likarajo.github.io/rock-paper-scissor

2018

- **Dallas Care**

Academic

- Relational database designed for a hospital

Tech/Skills: *N/A*

Repo: github.com/likarajo/DallasCare

Link: *N/A*

2017

- **Clock**

Personal

- An online clock that can be customized; can be reused in any web page.

Tech/Skills: *HTML, CSS, JS*

Repo: github.com/likarajo/clock

Link: likarajo.github.io/clock

2016

- **Brick Breaker Game**

Personal

- A One-player brick breaker game built using Javascript

Tech/Skills: *HTML, CSS, JS*

Repo: github.com/likarajo/brickbreaker

Link: likarajo.github.io/brickbreaker



WRITINGS

2018

- **Containerization**

Personal

- A beginners guide for Creating and Publishing Docker Image for a Python app.

likarajoblogs.wordpress.com/2018/10/02/creating-and-publishing-docker-image-for-a-python-app

I blog about what I learn and believe to let others benefit from it and collaborate.

Have a look at my writings here:

[LinkedIn Articles](#)

likarajoblogs.wordpress.com

- 2018
- **CICD**
Personal
 - A guide to learn the use of Jenkins for Continuous Integration and Continuous Deployment of projects.

likarajjoblogs.wordpress.com/2018/12/29/devops-continuous-integration-and-continuous-deployment
- 2018
- **Python UI Game**
Personal
 - A guide to build and containerize a GUI application

linkedin.com/pulse/basics-python-tkinter-rajarshi-chattopadhyay
- 2019
- **Summer 2019 Internship Experience**
Professional
 - An article based on my learning outcomes and experience during my Summer internship at Copart

linkedin.com/pulse/software-engineer-internship-experience-summer-2019-chattopadhyay
- 2014
- **RISC Processor using Harvard Architecture**
Academic
 - Based on my Bachelor's Thesis: Overview of designing and developing a Reduced Instruction Set Computing microprocessor, using Harvard Architecture.

likarajjoblogs.wordpress.com/2018/06/08/risc-using-harvard
- 2019
- **Functional and Object Oriented Programming**
Personal
 - An article based on my learning outcomes from attending and informational session on Functional Programming.

linkedin.com/pulse/functional-vs-object-oriented-programming-rajarshi-chattopadhyay
- 2018
- **Big Data in Agriculture**
Personal
 - My thoughts on use of big data in agriculture in the modern modern world.

likarajjoblogs.wordpress.com/2018/06/04/bigdatainagriculture



DIGITAL CREDENTIALS

I like to keep myself up-to-date with the latest technologies, through online training and certifications.

Have a look at my earned digital credentials here:

- 2019 ● **Spark - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop, Spark*
Link:youracclaim.com/badges/7f05e6d8-b805-4a35-88e6-c9602e349b3e
- 2019 ● **Hadoop Data Access - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop, Hbase, Hive, SQL*
Link:youracclaim.com/badges/8e71f4cd-bb49-40da-97b7-750c0e135d74
- 2019 ● **Hadoop Administration - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Flume, Hadoop, Oozie, Sqoop, Zookeeper*
Link:youracclaim.com/badges/1f77a5e0-03a1-440d-ab03-23a14822bf8
- 2017 ● **Hadoop Programming - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop, MapReduce, Pig*
Link:youracclaim.com/badges/539ed004-cc7d-4e7f-ac5f-b44f024d9bf4
- 2019 ● **Hadoop Foundations - Level 2**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop*
Link:youracclaim.com/badges/fecf5b63-2c1b-43a2-9101-88986f00881d
- 2017 ● **Hadoop Foundations - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop*
Link:youracclaim.com/badges/da3fba74-7fc3-4eca-8f37-45fbbaade1b1

- 2019 • **Big Data Foundations - Level 2**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop, Spark*
Link:youracclaim.com/badges/83e1235d-67e5-4ec6-bec0-cedd6832e5f2
- 2017 • **Big Data Foundations - Level 1**
IBM
• Online Training and Certification
Tech/Skills: *Big Data, Hadoop*
Link:youracclaim.com/badges/d16d7bef-403b-4f33-bd2f-46cb6ab86de6
- 2019 • **IBM Cloud Kubernetes Service**
IBM
• Online Training and Certification
Tech/Skills: *Cloud, Containers, Kubernetes, Orchestration*
Link:youracclaim.com/badges/5ced5713-fe22-438e-b5b4-55806161f654
- 2019 • **Docker Essentials**
IBM
• Online Training and Certification
Tech/Skills: *Cloud, Containers, Docker*
Link:youracclaim.com/badges/5a636a63-f897-4d8a-bdc6-45a02548a2ea
- 2017 • **OCAJP - SE8**
Oracle
• Online Training and Certification
Tech/Skills: *Java, Application Development, JDK, Lambda Expressions*
Link:youracclaim.com/badges/f8683ce3-65ef-4370-a014-b90e4e764ba4
- 2017 • **IBM Blockchain Essentials**
IBM
• Online Training and Certification
Tech/Skills: *Blockchain, Distributed Ledger Technology, Hyperledger, Ledger, Open Source*
Link:youracclaim.com/badges/1f9cc7ba-6947-4b68-b19a-dd87ca7358f2

2016

- **Enterprise Design Thinking Practitioner**

IBM

- Online Training and Certification

Tech/Skills: *Design, Empathy, Experience Design, Ideation, User-Centered Design, User-Centric, User Experience, User Research, UX*

Link:youracclaim.com/badges/988cb1ad-c09e-4f88-8161-60bd14da9522

KNOWLEDGE TRANSFER

2017

- **On-the-job training**

IBM

 Kolkata, WB, India

- Provided on-the-job training on application system architecture and database overview.

Tech/Skills: *SQL, Java*

2013

- **Workshop Presentation: Computer Architecture**

Narula Institute of Technology

 Kolkata, WB, India

- Delivered presentation on computer architecture in National seminar by IETE.

Tech/Skills: *Assembly Language, Microprocessor Intel 8085, Microcontroller Intel 8051*

I am passionate about sharing my knowledge with others. I believe that to teach is to learn twice. I have delivered at workshops at my college and at work.

2013

- **Workshop Presentation: Wireless Telecom**

Narula Institute of Technology

 Kolkata, WB, India

- Delivered presentation on wireless telecommunication in Industrial Educational Program at college.

Tech/Skills: *IPV4, IPV6, Cellular Commination*