

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*
- 2019
- **CV**
Personal
 - My Curriculum VitaeTech/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 data

Tech/Skills: *Spark, Scala, Latent-Dirichlet-Allocation*

Repo: github.com/likarajo/topics

Link: *N/A*

2019

● **Portfolio**

Personal

- My portfolio website

Tech/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/likarajo/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/likarajo/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/likarajo/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/likarajo/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 ● **Simulated OS**
Academic  University of Texas at Dallas
 - Simulated a computer system and implement a simple Operating System that manages the resources of the computer system.Tech/Skills: *C++, Unix*
Repo: github.com/likarajo/simOS
Link: *N/A*

- 2018
- **CICD**
Personal
 - Continuous Integration and continuous deployment using Jenkins.Tech/Skills: *Jenkins, DevOps*
Repo: github.com/likarajo/devops-helloworld
Link: likarajo.github.io/devops-helloworld
- 2018
- **911Calls**
Personal
 - Data Science and visualization on 911 calls data.Tech/Skills: *Python3*
Repo: github.com/likarajo/ds911calls
Link: *N/A*
- 2015
- **MQ Reporting Tools**
Professional  IBM
 - Developed a Java UI for daily queue status report generation for the core application on a single click eliminating manual effort.Tech/Skills: *Java, SWT, Unix, Bash*
Repo: github.com/likarajo/mqreporting
Link: *N/A*
- 2015
- **MQ Statistics Tools**
Professional  IBM
 - Automated daily queue status monitoring and reporting for the core application eliminating manual effort.Tech/Skills: *Unix, Bash*
Repo: github.com/likarajo/mqstats
Link: *N/A*
- 2017
- **Rock Paper Scissor game**
Personal
 - A One-player rock paper scissor game built using PythonTech/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.

likarajoblogs.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

📍 Copart Inc

 - 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

📍 West Bengal University of Technology

 - Based on my Bachelor's Thesis: Overview of designing and developing a Reduced Instruction Set Computing microprocessor, using Harvard Architecture.

likarajoblogs.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.

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

✿ DIGITAL CREDENTIALS

- 2019
- **Spark - Level 1**
IBM
 - Online Training and Certification

Tech/Skills: Big Data, Hadoop, Spark

Link:youracclaim.com/badges/7f05e6d8-b805-4a35-88e6-c9602e349b3e

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:

✿ youracclaim.com/users/likarajo

- 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-ab03-23a14822bfc8
- 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	<ul style="list-style-type: none"> ● Big Data Foundations - Level 1 <p>IBM</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Big Data, Hadoop</i></p> <p>Link:youracclaim.com/badges/d16d7bef-403b-4f33-bd2f-46cb6ab86de6</p>		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.
2019	<ul style="list-style-type: none"> ● IBM Cloud Kubernetes Service <p>IBM</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Cloud, Containers, Kubernetes, Orchestration</i></p> <p>Link:youracclaim.com/badges/5ced5713-fe22-438e-b5b4-55806161f654</p>		
2019	<ul style="list-style-type: none"> ● Docker Essentials <p>IBM</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Cloud, Containers, Docker</i></p> <p>Link:youracclaim.com/badges/5a636a63-f897-4d8a-bdc6-45a02548a2ea</p>		
2017	<ul style="list-style-type: none"> ● OCAJP - SE8 <p>Oracle</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Java, Application Development, JDK, Lambda Expressions</i></p> <p>Link:youracclaim.com/badges/f8683ce3-65ef-4370-a014-b90e4e764ba4</p>		
2017	<ul style="list-style-type: none"> ● IBM Blockchain Essentials <p>IBM</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Blockchain, Distributed Ledger Technology, Hyperledger, Ledger, Open Source</i></p> <p>Link:youracclaim.com/badges/1f9cc7ba-6947-4b68-b19a-dd87ca7358f2</p>		
2016	<ul style="list-style-type: none"> ● Enterprise Design Thinking Practitioner <p>IBM</p> <ul style="list-style-type: none"> • Online Training and Certification <p>Tech/Skills: <i>Design, Empathy, Experience Design, Ideation, User-Centered Design, User-Centric, User Experience, User Research, UX</i></p> <p>Link:youracclaim.com/badges/988cb1ad-c09e-4f88-8161-60bd14da9522</p>		



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*
- 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*