**ANIRBAN ROY**

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**OBJECTIVES**

* Results oriented Software Engineer, over 14 years of experience, with strong devotion to the mathematical sciences.
* Proven experience in full life cycle projects, in a rapid development and prototyping environment.
* Looking for continuous working areas of interest such as financial markets, engineering or thetechnical industry.
* Taking advantage of my skills in mathematical modeling, algorithmic analysis, and strong knowledge of design pattern based object-oriented programming.

**NON-TECH SKILLS**

* Excellent Communication skills developed from years of customer service and tutoring
* Data Analysis and predictive modeling work with SAS
* Constant self-education in both mathematics and computer technologies
* Applications of probabilistic models to approximate problems
* Using Finite Element Analysis to solve Engineering problems
* Active mathematics researcher/publisher to mathematics journals and SIAM member

**TECH SKILLS**

* Languages: JavaScript, Linux Bash Scripting,
* Currently Projects Use: Java (core), Python
* Operating Systems: Windows, Unix, Linux (Fedora, Ubuntu)
* Databases: MS SQL Server, MySQL, Postgres, Oracle, DB2, Cassandra, MongoDB
* Infrastructure Technologies: Apache Tomcat, Glassfish, IBM WebSphere, WebLogic 12c, JUnit 3/4, Hibernate 3, Spring 3.04, Kubernetes, docker
* Internet Application Technologies: HTML/5, XHTML, CSS/3, XML,
* Big Data: Apache Hadoop, Hive, HBase, Pig, Sqoop, Spark, ELK, Kibana, Kafka, Kerberos, Scala
* Cloud: Google cloud, AWS
* Component Technology: Ant, Maven, CVS, Subversion, Cruise Control, Hudson/Jenkins, GitHub, Git, Selenium, JProbe, JProfiler, Gitlab, Bitbucket
* Tools: Sublime Text, Eclipse, Visual Studio, IBM Rapid Application Development, NetBeans, Spring STS Suite
* Frameworks: SWT, Swing, JSF, Servlets, JSP, Spring, JDBC, JaxB, Mybatis, Hibernate, Spring Batch, Rest, Soap, SOFEA, Solr, Zookeeper
* Methodology: Agile, Extreme Programming, Test-Driven Development (TDD), Waterfall, Pair Programming

**EDUCATION:**

* MASTER OF APPLIED STATISTICS Pennsylvania State University
* World Campus/University Park, PA
* Statistics with applications to business and risk management.
* DUAL BACHELOR OF SCIENCE IN MATHEMATICS & ECONOMICS University Park, PA
* Pennsylvania State University (Completed 2009)
* Graduated with 3.5in the major GPA in mathematics specializing in Systems Analysis
* Minor in Statistics
* Significant coursework completion in Computer Science discipline
* Graduated in economics with a specializing in Macroeconomics

**PROFFESIONAL EXPEREINCE**

**Java Developer (January 2021 – Present)**

**Oshkosh Corp**

* Worked on .net C# application where I wrote an api to grab data from Apache impala and moved and exposed endpoints for a front-end web application.
* Created simple microservice JAVA api to feed the front-end dashboard in spring boot.
* Migrated old .net applications calling Hadoop cluster directly through Apache Impala. Into java microservice. Backend application now using mongo dB and data migrated into mongo dB through Apache Nifi.
* Created docker containers for application and moved them to the perspective servers manually.
* Migrated data using ETL tools like Nifi and spark and pushed them off of Hadoop into mongo db.
* Worked on telematics software to grab truck information from sensors and push them into the Hadoop cluster. This is being done though MQTT.
* Created a dashboard in zoom data to display various interesting plots using big data. Code written in Nodejs. Integrated Grit Map in zoom data with google cloud api
* Created a grit map dashboard which shows the locations off all trucks being deployed or serviced.

**Java Cloud Developer (January 2020 – January 2021)**

**Cigna**

* Create a Java/spring boot Consumer to create SparkSql Job
* Create Java/spring boot microservice to consume messages off of Kafka and push into postgres
* Integrate SparkSql in java spring boot application with Postgres on OpenShift and spring jdbc
* Wrote spark sql job in java spring boot using data frame api to convert frontend sql typed in by user into react app into a backend spark/sql job
* Built Java/Spring boot Api to retrieve data stored in hive tables
* Deployed Java application as a docker container into OpenShift
* Deployed containers in Docker into OpenShift environment
* Created spark nodes as docker YAML and deployed in OpenShift.
* Created various java applications secured by oauth and JWT to change fields in a database. (Intended to be called be a react frontend.)

**Java Cloud Developer / Big Data (September 2018 – January 2020)**

**Mayo Clinic/Express Scripts**

* Build a java microservice to deliver Hadoop job information stored in Yarn to frontend
* Build backend Rest api using spring/boot forget/post/Delete and update to postgres
* Wrote spark sql job to replace Sql queries that were previously run-on Teradata
* Wrote spark sql job using data frame api to convert frontend sql typed in by user into react app into a backend spark/sql job
* Managed spark cluster as an ephemeral cluster on AWS EMR
* Deployed Java Jar and Scala Jar to AWS EC2
* Setup log containers on AWS S3
* Created caching system in AWS Elastic Cache to create state of requests being sent.

**Full Stack Developer (Dec 2016 – September 2018)**

**AT&T, (Bedminster, NJ)**

* Maintain and upgrade software on 4 different Hadoop clusters.
* Built application to monitor state of Hadoop cluster and email team members upon service failures. Bounce stopped services. (MEAN STACK)
* Automate bouncing of downed servers.
* Create a web application using angular2/4 and Node js to display big data into cesium globe, and d3 charts.
* Create a java microservice backend to deliver analyzed big data to the frontend.
* Create Java microservice to consume messages off of Kafka and push into mongo dB
* Setup Kubernetes and docker to deploy in Google cloud
* Analyzing large datasets using Scala/python and Apache spark
* Create Map reduce jobs against large dataset to grab appropriate data for analysis
* Piped data over into mongo dB database using java consumers and Kafka queue
* Used various machine learning api analyze big data set for risk
* Created scripts in python for data migration/modification into our databases

**Sr. Java Developer/Search Engineer/Big data Engineer (Nov 2014 – Dec 2016)**

**VWR, Radnor, PA**

* Created various rest services to interface front end web-site with SAP pricing software
* Built out an SAP datahub to push all messages and data given from SAP into a postgres database for web consumption
* Moved Search Engine from Lucene and built out new engine on Solr Cloud 5.5.3
* Setup SonarQube to monitor code quality and unit tests
* Built out Notification Engine to handle sending of Client Emails based on Shopping Basket and order notifications. Using Spring MVC, RabbitMQ, and Spring AMQP
* Setup production Unix Environment for Apache Solr and Zookeeper
* Built search engine using java/solrj to grab indexed items in Solr and return scored search results
* Created caching mechanism for complicated data objects using Apache Cassandra
* Developed in house application using AngularJS, jQuery, Bootstrap, Spring MVC and Java 8 to handle updates made into a PIM system to appear on webpage.
* Running proof of concepts for personalization projects to store large volumes of Data in a data lake. Using Apache Hadoop, hive, HBase, pig, Sqoop, flume, and spark.
* Created VWR data lake and pushed data into a production environment.
* Create scripts using oozie, sqoop and Apache Nifi to move data from rdbms sources and Salesforce into data lake.
* Ran Apache Spark jobs against the Datalake using various machine learning tools

**Sr. Java Developer (Full Stack) (April 2014 – Nov 2014)**

**Citi-Bank/Consultant, New Castle, DE**

* Upgraded Teck Stack from JSF 1.2 to JSF 2.2 introduced facelets to JSF lifecycle
* Converted JSP's to make them XHTML compliant and rewrote user interface pages
* Created Reports in PDF HTML from Database using Web focus and Jasper
* Worked on enhancements and updates to Solr/ java-based search engine
* Created Multiple Batch Processes using Spring Batch for handling check Payments overnight
* Moved code from WebLogic 10 to WebLogic 12c server for deployment
* Installed Jenkins Plugins to automate build process and help with code control

**Java Developer/Quantitative Modeler (Sept 2012 – March 2014)**

**The Vanguard Group, Malvern, PA**

* Devised Methodology engine to employ Monte Carlo simulations to client’s portfolio.
* Created alternative approach using sensitivity simulations for faster computations
* Used various Quant models for approximations analysis-built backend computations in python
* Research other plausible programming languages to deal with inadequacies of java
* Expert in Java concurrency and using multi-threading to speed up CPU exhausting calculations
* Worked on making several batch related tasks into real-time applications
* Worked on Brownian motion model for possible perturbations to portfolio balances
* Worked with various linear programming APIs for optimization problems
* Designed mid-Tier structure such that user interfaces could connect with methodology engines.
* Devised JDBC calls so methodology engine can pull/save data to db2 databases
* Used JProfiler to spot memory leaks and performance related inadequacies
* Helped set up Jenkins jobs for continuous integration with prior code

**Production Support Specialist (June 2011 – Sept 2012)**

**Wells Fargo Bank Bethlehem, PA**

* Linux, UNIX Environment
* Checked log files for reported errors
* Made corrections or contacted design team to handle any errors
* Primary worked involved continuous work on Java based CMS system
* Worked hands on with development team to deal elevating code into production

**Algorithmic Trader / Java Developer (Jan2010 – June 2011)**

**New York, NY**

* Hands-on experience in writing software for trade execution
* Gathered business requirements from traders/quant's and implemented mathematical formulas to perform black box trade executions
* Created additional calculation engine using Erlang

**Engineering Tools (September 2009 – December 2009)**

**Aecom, Philadelphia, PA**

* Developed a GUI in a team environment using J2SE1.6. An interface for Finite Element problems using Swing, and SQL server 2005.
* Worked closely with engineers, made use of agile methodology in creating a finite element engine to handle multiple exceptions to the program that may arise from engineering style problems.

**Research Assistant (September 2008 – May 2009)**

**Pennsylvania State University**

**University Park, PA**

* Numerical solutions to a second order, linear, elliptic partial differential equation
* Published research paper in the SIAM Journal, Advisors Victor Nistor, Anna Mazzucato