

Swastik Roy

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CONTACT INFORMATION

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WORK EXPERIENCE (+2 Years)

SUMMER TECHNOLOGY ANALYST at [GOLDMAN SACHS](#)

May 2018 – Aug 2018 | Salt Lake City, UT

- Built application to optimize document generation workflow that reduced operations workload for the tasks by overall 70%.
- Reduced network response time by 0.7s by building data aggregation services over **SQL databases** & external services.
- Developed software modules to summarize end-to-end workflow and visualize transaction data using, **React** & D3.JS.

RESEARCH WORKER at [CYBERINFRASTRUCTURE AND COMPUTATIONAL INTELLIGENCE LAB](#)

January 2018 – May 2018 | Tempe, AZ

- Developed **semantic analysis** techniques for thematic classification of geospatial metadata from OGC web services.
- Developed geospatial **entity extraction** algorithm for OGC service metadata using DBpedia & GCMD ontology.

SOFTWARE ENGINEER at [BEEHYV SOFTWARE SOLUTIONS](#)

June 2015 – June 2017 | Hyderabad, India

Full Stack Development

- Managed multiple projects with time constraints ensuring on-time delivery of project goals.
- Redesigned **official website of Beehyv** and optimized for search engines using HTML5, SCSS (CSS Precompiler) and jQuery.
- Built plugins(**Magento, Jira & Standalone Javascript SDK**) to integrate a backend chat assistant into websites.
- Programmed services using **Java Spring, Hibernate** and **Data JPA**; and used **Docker** to build a continuous delivery pipeline.

Mobile Development

- Managed a team of developers, built **Android application** and map visualization to monitor survival of 75600 low birth weight babies in Bihar state of India.
- Created **kiosk app** to control salad making robot Sally(Chowbotics Inc.) using **Android, Spring** Framework and **MongoDB**.
- Extended **Android application** for the medical diagnosis of individuals and to prevent outbreak of communicable diseases.

Data Engineering

- Engineered end to end modules for a **Question-Answering** Platform used to answer user queries on ecommerce websites.
- Improved ranking of **Apache Lucene** results using one-to-one cosine similarity of the word vectors against query text.
- Increased accuracy to interpret questions to 88%(from 70%) using **Natural Language Processing** techniques such as dependency parsing, named entity recognition, relationship extraction; and **Machine Learning** to classify questions.
- Developed **crawlers** and **parsers** to extract semi-structured text from Web using **Apache Nutch, JSoup, HTMLUnit**.
- Improved accuracy of HTML DOM based **semi-structured web content extraction** approach (from 51% to 75%) by extending it with visual approach using CSSBox library.

ACADEMIC PROJECTS

[INTELLIGENT TEAM FORMATION FOR RESEARCHERS](#) at **ARIZONA STATE UNIVERSITY**

Aug 2017 – Dec 2017 | Tempe, AZ

- Extracted technical phrases from research papers using POS Tagging, Named Entity Recognition, and LDA Topic Modelling.
- Trained Doc2Vec model using 30,000 research papers from ACL anthology dataset.

EDUCATION

MASTERS IN COMPUTER ENGINEERING

ARIZONA STATE UNIVERSITY, Tempe, AZ

GPA: 4/4

May 2019

BACHELOR OF TECHNOLOGY

INDIAN INSTITUTE OF TECHNOLOGY, DHANBAD, INDIA

GPA: 7.56/10

Graduated May 2015

SKILLS

Programming Languages - Java , JavaScript , Python , C/C++

Databases - MySQL , MongoDB , Elasticsearch , SQLite

Web - HTML5 , CSS/SCSS/LESS , Grunt/Gulp , JQuery, Angular, React , Bootstrap, SemanticUI , SEO

Frameworks - Java Spring , Python Django , PHP Codigniter , NodeJS , Apache Spark , Hadoop , Apache Kafka, Android

Natural Language Processing - OpenNLP , WordNet , Word2Vec , IBM Watson , Stanford CoreNLP , Apache Nutch

Machine Learning - Scikit Learn , Deeplearning4j , Tensorflow , Gensim , Keras

AWARDS

- National Finalist at Microsoft Imagine Cup, India 2013, 2014 and 2015.
- **1st prize winner** at "Hack AZ 2019" Hackathon at University of Arizona for best AI powered recruiting application.
- **3rd prize winner** at "Hack for Humanity 2018" Hackathon at Arizona State University.