SOUTRI MUKHERJEE

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EDUCATION

Indiana University, Bloomington, Indiana   **Aug 2019**
Master's in Computer Science
Pune Institute of Computer Technology, Pune, India   **Jun 2016**
Bachelor of Engineering in Computer Engineering

TECHNICAL SKILLS

Languages:	Python, Java, C, C++, R, Scala, Ruby
Web Development:	HTML/HTML 5, XML/XSLT, CSS, PHP, JavaScript
Databases and Cloud Platforms:	SQL, MongoDB, Cassandra, Oracle, Hadoop, Openstack, AWS
Frameworks:	Spark, MVC, Bootstrap, Flask , Django, React, Angular Js, NodeJs , JQuery
Tools and Technologies:	Bower, GULP, Qt, Tableau, Selenium, Robo 3T, Git

WORK EXPERIENCE

Research Assistant   **Jul 18-Sep 18**
Indiana University,USA
- Developed a ML model that predicts head movement of user while watching any 360 degree video.
- Improved on the existing product by developing a LSTM architecture which improved the accuracy from 70% to 85%.

Technologies used: Time-Series, Scikit, Keras, Pandas, Python

Full-Stack Development Intern   **Jun 18-Aug 18**
Ardent Security, Baltimore, USA
- Developed a cross-platform OS optimization tool for a cloud based data minimization platform in an agile environment.
- Implemented **RESTful** services using **MVC** architecture for managing multiple agents across a distributed network.

Technologies Used: Gulp, Bower, Bootstrap, Angular JS, Python, MongoDB.

Application Development Associate   **Nov16 – Jul 17**
Accenture, Pune, India
- Designed Test Scripts from the Automation testing and Unit Testing teams for international clients using Java and Selenium.
- Automated monthly budget tracker to reduce manual work. Also, Developed business models and monthly forecasting reports.

Technologies Used: Java , Selenium, RTC, Coupa, Abacus, MME.

I.T. Summer Intern   **Jun 14 – Jul 14**
Indian Oil Corporation, Kochi, India
Developed a web based application that analyzes lubricant-fuel ratio, sales growth and average sales to generate performance metric reports for business stakeholders.
- **Data collection**: Designed and implemented JSP pages to fetch and load data from Oracle XE database.
- **Query tuning**: Worked on optimizing and tuning SQL Queries and improved performance and response time by 40%.

Technologies used: Java Server Side Programming, Java Applets, JDBC, Java Servlet, XML, JavaScript.

PROJECTS

Apache Airavata(Open Source Contribution)(Java, Apache Thrift, Open JPA, VueJS, Django)   **Aug 18**
- Developed a file upload science gateway for API server management to parse files for further processing information.

Emonet- A Real Time Emotion Detection Tool (CNN, Keras, Python)   **May 18**
- Designed a Deep Convolutional Network architecture that extracts facial features of the user from a live video application and instantly returns their emotion with 87% accuracy.

Switcherette (Application Resource Optimizer Tool)   **May 18**
- Awarded the best project for performing a comparative analysis of energy usage and data consumption of a mobile application client and web browser client for the same service and suggested solutions to optimize mobile app performance.

Stock Prediction Using Social Media Data (NLTK, Keras, Tensor Flow, Python)   **Apr 18**
- Developed a model that predicts stock market trends using Twitter feeds. Developed **LSTM+CNN** and **SVM** models that uses human sentiment to predict stock behaviors for any set of companies and achieved accuracy of 85 % and 92% respectively.

Creating Multi-Image Panoramas (C++, Computer Vison)   **Jan 18**
- Developed a system that combines multiple pictures into a 360-degree panorama. This software detects uses SIFT features to perform feature matching. After warping and blending, the system presents a panorama image.

Kernel Programming Xinu Embedded Operating System (C, Operating Systems)   **Oct 17**
- Implemented in memory file system using standard file system primitives and created an inter-process communication using UDP on Xinu. Implemented futures to allow parallel processing. Also, created the entire ext2 file system over Xinu operating system.

OpenStack Resource Management Tool (Python, Openstack, Qt)   **Jun 16**
- Automated Multi-node Openstack Deployment using Ubuntu Servers 14.04 nested over VMware ESXi 5.5 and contributed to open-source community by developing a software that fetches real time monitoring results for the instances created on cloud.