

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

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

WORK EXPERIENCE

Software Development Intern

Jun 18-Aug 18

Ardent Security, Baltimore, USA

- Developed a cross-platform operating system optimization tool for scanning and deleting unused files.
- 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

- Developed and executed Test Scripts in Automation testing 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 tool 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.

OTHER PROFESSIONAL EXPERIENCE

Research Assistant

Jul 18-Sep 18

Indiana University

- Developed a model that predicts head movement of user while watching any 360 degree video.
- Improved on the existing model by developing a LSTM architecture which improved the accuracy from 70% to 85%.

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

PROJECTS

Emonet- A Real Time Emotion Detection Tool (CNN, Keras, Python)

May 18

- Developed 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 methods 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 tool that fetches real time monitoring results for the instances created over Openstack..