RACHIT THIRANI

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EDUCATION

MASTER OF COMPUTER SCIENCE – NC STATE UNIVERSITY, RALEIGH, NC – AUG 2016-DEC 2017

Courses - Operating System Principles, Data Intensive Computing, Design and Analysis of Algorithms, Advance Data Structures, Automated Learning and Data Analysis, Algorithms for Data Guided Business Intelligence, Database Management Systems, Graph Data Mining, Foundations of Data Science, Artificial Intelligence

BTECH IN INFORMATION TECHNOLOGY – MANIPAL UNIVERSITY, MAINPAL, INDIA – 2010-2014

EXPERIENCE

INTERACTIVE DEVELOPER L1, SAPIENT NITRO, BANGALORE, INDIA – 2014-2016

- Specialized developer in **Front-End** domain for several multi-million dollar clients.
- Developed and tested responsive components with cross browser compatibility for client's webpages.
- Reduced the maintenance effort required by automation of CSS for all clients's modules using GRUNT and LESS
- Managed Front-End developers as Track Lead and POC for all development
- Additional Technologies Used - HTML5, AJAX, Javascript, JQuery, Bootstrap, NodeJS, AngularJS, CSS3

SKILLS

- **Computer Languages** - C, C++, Java, Python, Perl, C#
- **Data Science** - R, Apache Kafka, Spark, Doc2Vec, NetworkX, Numpy, Scipy, Pandas, Matplotlib, NLTK, Scikit-Learn
- **Web Development** - HTML5, CSS3, Grunt, Javascript, NodeJS, LESS, AJAX, HandleBars, AngularJS, ReactJS
- **Web Services** - AWS, DynamoDB, Map Reduce, Distributed Systems, Kinesis, Pig, Hive, Hadoop Amazon EC2,

PROJECTS

Operating Systems

Non Persistent Heap - Developed an in-memory kernel module, that provides efficient data sharing among different processes, in **C** which maps kernel space memory into user space memory using the user-space library interface and signs the requested size memory , specified by the offset, in kernel using the offset. Lock and unlock functions were implemented using the user space library to guarantee only one process can access an object at the same time leveraging the shared memory policy.

Transactional Non Persistent Heap - Designed a kernel module in **C** which utilizes the concept of concurrency without locking. Version number is maintained for the object and a transaction is allowed to commit only if the version number is the same, i.e. no other transactions has changed the value. If the transaction cannot commit, it is aborted and restarted.

Non Persistent Heap File System - Implemented a File System in **C** using the Fuse library and previously developed NPHeap kernel module. The file system is compatible with conventional file system operations. Data structures and operations that maintain the abstraction of a file system were implemented, with persistent data storage capabilities.

Data Science

IMDb Rating and Gross Income Prediction - Developed a tool in **R** for cleaning of IMDb's data and prediction of rating for upcoming movies based on the attributes like actor's rating, director's rating, genre using machine learning techniques such as **decision tree**, **k means clustering** and **neural networks**.

Bitcoin Price Variation Prediction - Utilized machine learning technique of **Bayesian Regression** in **Python** to predict the variation in the cryptocurrency useful for bitcoin trading, using an application to predict the variation in the bitcoin price, useful for bitcoin trading strategies.

Market Segmentation - Developed an application to predict the communities using Facebook's data using **Python,** useful in detecting the group of people with similar taste, helpful in recommendation of friends, network analysis and visualization based on the algorithm **Structure-Attribute Clustering**.

Time Series analysis - Built an application to predict the popularity of a restaurant at a particular day and time based on time series analysis on the checkin dataset provided by Yelp using **Python** and **MongoDB.**

Anomaly Detection - Developed an application to find out the anomalies in time evolving graph using data from different domains using **NetworkX and Python** based on the NetSimile algorithm.

Database

Course Registration System - Developed an application for managing course registration, financial details, administrator functionalities while utilizing the concepts of relational databases using **Java** and **Oracle** with extensive use of **procedures** and **triggers**.

Web Services

Processing of Streaming Data using AWS infrastructure Services - Built a pipeline to process massive volumes of streaming data obtained using the Twitter API using **AWS Kinesis** for handling the streamed data, **AWS Dynamodb** for storing the unstructured data in a **NoSQL** Database, **AWS Elastic Map Reduce** to process the large volumes of streamed data efficiently. Implemented **Pig**, **Hive** and **Spark** programs to perform data analysis on an **Elastic Map Reduce cluster** and compared their performance.