

SATYA SUVEEN REDDY MEKALA

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Objective

To secure a full-time position that will enable me to use my strong organizational and technical skills and would provide with a platform to portray the best of my abilities and also get an opportunity of self-development through challenging assignments

Skills Summary

Programming Languages: Python (Numpy, Pandas, Sklearn, PySpark, BeautifulSoup4), C, R, Java;

Database: MySQL, SQL, MongoDB, RDBMS;

Cloud Technologies: Amazon Web Services (AWS), Spark, Hadoop, MapReduce, S3, EC2;

Operating Systems: Windows, Linux/Unix (Ubuntu), Mac OS;

Web Technologies: HTML, JavaScript, Node.js, Express.js, HTML5/CSS, HTTP, WordPress;

Software Tools: Tableau, Microsoft Excel, Git, Shell Scripting, Docker, Matplotlib, MVC;

Other: ETL, Eclipse, Jupyter, Apache Tomcat, Unit testing, Networking protocols (TCP/IP);

Experience

General Electric (Digital), San Ramon, CA

Jun'17 – Aug'17

Role: **Analytics Engineer Intern**

- Worked on migrating the code to Amazon Web Services. Gained knowledgeable information on the AWS ecosystem.
- Developed data cleansing and imputation code modules reliable for PREDIX platform (PaaS) applying machine learning techniques on the time series data.
- Impacted the accuracy of detection of faults in the data by improving it by 18%. Unit testing was done to accommodate further development of the code. Implemented using Python, PySpark.
- These modules were featured in the Sep'17 release of the Operations Optimization V2.

Education

Masters in Computer Science

Graduation: May'18

Illinois Institute of Technology, Chicago, IL, USA; GPA – 3.5

Course work: Algorithms, Database Systems, Data Preparation and Analysis, Machine Learning, Cloud Computing, Operating Systems, Computer Networks, Science of Programming, Software Project Management, Geospatial Vision and Visualization

Bachelors in Electrical and Electronics Engineering

Aug'12 – May'16

VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, INDIA; GPA – 3.72

Projects

Tera Sort on Hadoop/ Spark

Fall 2017

- Implemented the Tera Sort application in Java to run in memory instead of on disk also in Hadoop and Spark.

- Sorted 128GB and 1TB data using the above methods on AWS EC2 instances of different configurations.
- Compared the performance on each instance for all the 3 methods.
- Shell scripts were written to save time by automating the process.

Benchmarking

Fall 2017

- Designed and implemented benchmarking programs for CPU, GPU, Memory, Disk and Network.
- Multi-threading and strong scaling impacted the concurrency performance.
- Shell scripts were written to automate the whole process. This improved user experiences.

Operating Systems

Spring 2017

- Writing systems calls to increase the functionality of the MIT created OS: XV6 in C
- Consistent and modified the file system to accommodate more files than the default number.
- Implemented an efficient memory management and file allocation script to improve speed of the CPU.

Crime Prediction

Spring 2017

- Predicted the field of high crime based on different features from the database using Decision trees.
- Applied Linear classification using Gaussian Naïve Bayes and Linear Space Vector Classification.
- Applied linear and ridge regression for predictions in Python.

Separating Points by Axis parallel lines

Fall 2016

- Implemented efficient local optimization algorithm for the NP-hard problem by collaborating with team.
- Created an algorithm and implemented it in JAVA in $O(n^4)$.

Database and web design project- Online Shopping store

Fall 2016

- Developed the front-end of a website (full stack) which allows them to buy products based on different categories using HTML, JSP along with CSS and implementing REST API architecture.
- Also constructed the back-end by defining and populating various MySQL tables and wrote queries in order to implement the required functionalities such as basic search and user review system.

Transit traffic routing

Fall 2016

- Improved efficiency of network traffic by using total utilization of network and traffic control variables in python.
- Achieved total optimization of the network traffic. Networking techniques were used for this purpose.

An Improved Solar Maximum Power Point Tracker with an efficient DC link

- Increased the efficiency of MPPT converter by using Artificial Neural Networks (ANN).
- Achieved this by collecting data from the solar panels for different times of the data and analyzed using WEKA.
- ANN is trained and simulation showed that this increased the efficiency obtained by 8%.