

DEV PRANAV PUCHAKAYALA

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AVAILABLE: June 2016

EDUCATION

Northeastern University, Boston, MA

May 2016

College of Computer and Information Science

GPA: 3.67/4.0

Candidate for a Master of Science in Computer Science

Related Courses: Programming Design Paradigm, Fundamentals of Computer Networks, Information Retrieval, Algorithms, Parallel data processing using Map Reduce, Computer Systems.

College of Engineering, Anna University, Chennai, India

April 2014

Bachelor of Engineering in Electronics and Communication

GPA: 8.98/10

Related Courses: Fundamentals of Computing, Unix programming, Data Structures and Object Oriented Programming using C++, Computer Architecture, Embedded Systems.

TECHNICAL KNOWLEDGE

Languages:	C, C++, Python, Java, Matlab, R, Swift, Racket
Web development:	HTML (basic), CSS (basic), AngularJS, Bottle (Python Web Framework)
Technologies/Database:	ElasticSearch, MongoDB, Spark SQL, Apache Hadoop, Pig, Hbase
Operating Systems:	Windows XP/7, Mac OSX, Linux
Software:	Eclipse, PyCharm, Xcode, RStudio, NS2, GNS3, Packet Tracer
Certifications:	Java Se6 Programmer (1ZO-851), CCNA (640-802), CCNP (642-902,642-813,642-832)

WORK EXPERIENCE

Goldman Sachs LTD., Bangalore, India

June-August 2013

Software Engineer Intern (Summer Analyst Program)

- Developed a tool to generate CML templates for various Config files using Python
- Collaborated with configuration management team to create the web application
- Completed the project successfully within given duration and was offered a full-time job opportunity as a software developer.

ACADEMIC PROJECTS

Amazon Movies Review Analysis (Java, MapReduce, SparkSQL)

Northeastern University, Boston, MA

December 2015

- Developed a web interface using HTML5, JSP, Servlet and used Amazon Cluster API to dynamically create EMR clusters on AWS and read files from S3 storage.
- Implemented plain MapReduce task to identify top K helpful reviewers from huge Amazon Movie Review Dataset.
- Performed data feature enhancement by querying the Amazon Product Advertising API and OMDb API using parallel Web Crawling in MapReduce.
- Joined the crawled data using SparkSQL and provided movie recommendation through the web service that recommends movies based on the genre and type of rating which the user selects from the front-end

File system implementation, Threads synchronization and context switching

Northeastern University, Boston, MA

December 2015

- Developed a C program using POSIX threads to solve deadlock scenario in Dining Philosophers problem by making use of mutex locks and condition variables.
- Developed a C program to replicate file system similar to Linux ext2 with functionalities such as mkdir / rmdir / truncate / ls / ls -l / read and write. Used Fuse Interface on Linux to test the file system.
- Developed a C program to switch between two programs, by manipulating stack pointers.

Average Flight Delay using MapReduce, Pig and Hbase

Northeastern University, Boston, MA

November 2015

- Developed a Java Program using Hadoop Jar to create a MapReduce Task to calculate Avg Flight delay for all two legged flights from ORD to JFK from a huge dataset.
- Developed a logic to perform Join operation to form valid flight pairs to satisfy required conditions.
- Implemented same program in Pig Latin scripts using Join and Filter functionalities. And also used Hbase as an index.

Retrieval Models, Indexing, Machine Learning

Northeastern University, Boston, MA

January-April 2015

- Developed a Python code and algorithm to efficiently index a large collection of text documents in hard disk and also to index in Elasticsearch using API.
- Calculated scores based on Vector space and language models for given queries and obtained good precision values.
- Implemented Decision Tree algorithm from Python Sci-Kit library to train and test data by using the calculated scores as features, the obtained results showed good precision on test data.

Web Crawler, Vertical Search and Page Rank

- Developed a Python code to crawl around 30,000 URLs and combined crawls from fellow mates using distributed indexing feature of Elasticsearch to form web graph.
- Developed a python script to calculate F1 measure, precision, Mean-precision.
- Implemented the page rank algorithm on the graph.

Roll Your Own CDN (Content Delivery Network)

Northeastern University, Boston, MA

November-December 2014

- Developed a small scale CDN to deliver web pages requested by the client.
- Wrote programs for creating DNS and HTTP servers in python and deployed code on Amazon Web Servers.
- Developed a mapping logic to redirect client to the nearest server to reduce latency using geoip service and regular ping statistics from all HTTP servers to determine roundtrip time.