Naresh Dharmasoth

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Education

Year	Certificate/Degree	Institution	CPI/%
2012	B.Tech Computer Science & Engineering	IIT Kanpur	5.5/10
2007	XII Board of Intermediate Education, AP	Bhartiya Vidya Bhavan, Hyderabad	91.7
2005	X Board of Secondary Education, AP	Fatima High School, Mahabubabad	87.1

Employment

- **Saggezza, India** — Associate Software Engineer
  Lube Insights — *June 2013 - current*
  - Lube Insights is a big data solution that encapsulates technologies and techniques for analytics and data mining capabilities having ability to process any data records by a generic mapper and reducer
  - Designed and implemented a console language. The language is built on top of the services buit on Lube Insights system for providing data summarization, query and analysis
  - Co-developed space efficient aggregations and considerably time efficient customized functionalities
  - Worked primarily on Java, MapReduce, Lex and YACC
- **Skyfi Education Labs** — Developer
  Code Instruct — *December 2012 - April 2013*
  - Co-created Code Instruct, an organization under Skyfi Education Labs that conducts training and workshops to under graduate students in Computer Science
  - Designed, created and hosted on-line examination portals for the trainings/workshops conducted

Key Academic Project

- **B. Tech Project** — MATLAB
  Robust Face Recognition Invariant to Pose and Illumination — *(January - April, 2012)*
  - Robust implementation of face recognition algorithm in the case of multiple persons in images prone to fluctuations in lighting, pose and scale
  - The set of Unconstrained Minimum Average Correlation Energy (UMACE) filter is designed for each person and correlated the test image with every reference image
  - It successfully recognized the data set containing about 2000 training image and 180 testing image set with a recognition rate of approximately 0.93
- **Content-Based Image Retrieval using Hierarchical Cellular Tree** — JAVA
  Indexing and Searching techniques in Databases course project — *February -April, 2012*
  - Designed a model for Content-Based Image Retrieval (CBIR) using Hierarchical Cellular Tree(HCT), a dynamic indexing scheme based on hierarchical clustering method used to group objects into cells on the basis of their similarity
  - Spectral measures, statistical moment invariants and color histograms are used as feature vectors in each level of hierarchy tree for dynamic updating and retrieval
  - Given an image, extracts the most relevant images using kNN query
- **Data Structure for dynamic paths in graphs** — JAVA
  Data Structures and Algorithms course project — *January, 2012*
  - An augmented balanced binary search tree maintaining dynamic paths in a directed graph with time complexity O(lgn) for each operation and queries
  - supported operations are linking, splitting two graphs, update weight of each edge in a path, reversing the direction of a path and queries like reporting the minimum weight edge in a path, whether a vertex is reachable from another vertex in the graph
- **Extension of Nachos** — JAVA
  Operating Systems course project — *August - November, 2011*
  - The project aimed at providing various functionalities to Nachos, instructional software that runs as secondary OS on Linux. Simulated and analyzed various system calls and scheduling algorithms using operating systems concepts.

  - Simulated various page replacement algorithms for memory management

- **Compiler for the programming language Modula-2** Python, Lex, YACC
  Compilers course project *January - April, 2011*
  - Designed and implemented a compiler for a subset of the Modula-2 programming language
  - Supported features like type checking, dynamic scoping and recursive functions
  - Successfully compiled sophisticated programs like Bubble Sort with constructs like arrays, procedures, if statements and nested loops to MIPS assembly code

- **Database for Fantasy Football League** PHP, MySQL, HTML
  Database Systems course project *January - April, 2011*
  - Designed and implemented an interface for Fantasy Football League optimized for 3NF
  - Implemented convenient viewing of statistics of every players profile according to their performance, previous biddings for the player, fantasy player rankings, current and previous squads of the fantasy team

Relevant Courses

- Data Structures and Algorithms, Indexing and Searching Techniques in Databases, Machine Learning, Database Systems, Compilers, Operating Systems, Computer Networks, Theory of Computation, Principles of Programming Languages, Programming Tools and Techniques, Computer Organization, Discrete Mathematics, Fundamentals of Computing

- Other Courses: Computational Algebra and Number Theory, Introduction to Game Theory, Introduction to Mathematical Logic, Numerical Analysis, Complex Analysis and Linear Algebra, Differential Equations

Technical Skills

- Programming Languages: Java, Scala, Python, Introductory assembly language(IA32 Architecture)
- Platforms: Linux, Windows
- MapReduce Tools: Hadoop, Pig, Hive
- Other Tools: Shell Scripting, Lex, YACC, MySQL, LaTeX, R, MATLAB