CHINTAN SHAH
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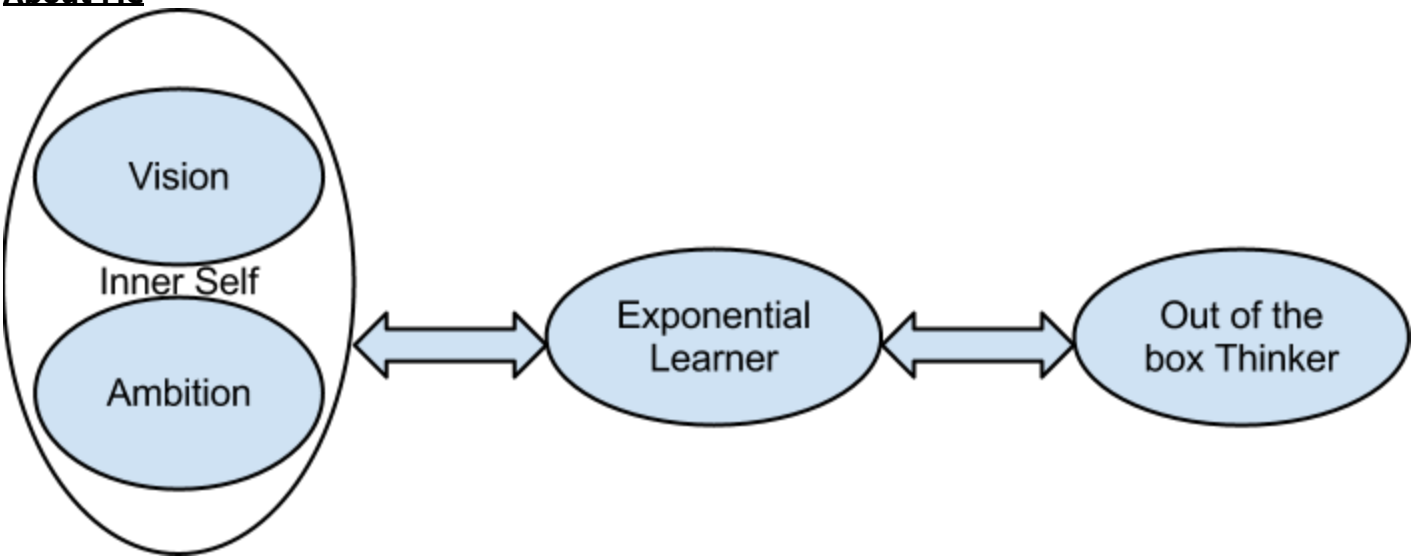
7805 Arbor Grove Dr Apt #210 Hanover MD 21076

About Me



Software Developer

- Technologist with more than 4 years on Product or Server Side development (C++, STL and Boost), Client as well as Server side development (Core Java) and Service oriented architectures
- Solid experience with the development and debugging of concurrent systems for real-time and embedded environments on RHEL and WINCE 6.0 respectively
- More than 2 years of C++ experience on Windows as well as Linux
- Brainbench Certified C++ Programmer with the percentile ranking 82%
- More than 2 years of Core Java experience with J2SE 5.0 and J2SE 6.0
- Skilled to analyze and research large data sets to exploit market micro-structure moves
- Solid understanding of Data Structures and Algorithms
- Executed the complete Software Development Life Cycle with Agile Methodologies
- Passionate about technologies such as Hadoop (Map-Reduce Framework) and Real Time Trading Systems
- Familiarity with the FIX protocol
- Excellent Contributor with a strong sense of value-addition in innovative ways

Machine Learning - Developer

- Mathematical Problem Solver with expertise in Machine learning and relentlessly passionate about the subject
- Developed Machine learning tools and trained classifiers in C++ and Matlab for real world data sets
- Solid exposure to Speech Recognition, Neural Networks, Artificial Intelligence and Signal Processing
- Interested in developing Bayesian or Reinforcement Learning techniques for prediction of investment decisions for trading systems or hedge funds

EDUCATION

- M.S., Computer Science; Oregon Health Sciences University (Portland, USA) GPA 3.5/4.0 (September 2004 - March 2007)
- B.E., Information Technology; Dharmsinh Desai Institute of Technology (India) First

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Class with Distinction (September 1999 - May 2003)

TECHNICAL SKILLS

- Systems Programming – C, C++, WIN32, ACE, TAO, Boost, Core Java, JavaBeans, Servlets and JSP
- Database Systems – Oracle 9i, SQL Server 2005, MySQL and POSTGRES
- Tools – Vi, MS Visual Studio .Net 2005, Netbeans 6.9, Matlab 7.0
- Operating Systems – Linux (Open SuSe 10/11, CentOS) and Windows CE 6.0
- Version Control – Source Depot and SVN
- Scripting Languages – TCL, Perl, Ruby

Software Developer Nov 2010 - Present
Goral Trading (Baltimore, MD) - Employee

- Developed and enhanced the scalable and extensible Execution Management system (EMS) to trade US Equities from the scratch
- Responsible for the architecture and the overall design of the EMS including multi-threading, object pooling and data structures
- Developed an equity strategy to obtain executions passively on various venues
- Developed the module to handle market data using Activ Financial SDK
- Developed the Execution simulator to get better micro price, minimize under fills and less market impact
- Refactored, bug-fixed, profiled to get rid of memory leaks and cleaned up the EMS in agile fashion and released in production along with major performance enhancements
- Enhanced the open source FIX parser to insert the fix messages into the tick database from logs in real-time
- Extended the GUI for the project to monitor trading with several features using Java Swing
- Reported the Software and Hardware issues with the vendors for the production and/or development environment(s)
- Developed automated test cases for FIX Certification with the prime broker
- Configured OneTick Server and collector to record real time feed from Activ Financial
- Techinical Environment: OneTick, Core Java 1.6, Revolution R, Red Hat Linux

Software Engineer Mar 2010 - Nov 2010
Automated Trading Desk, A Citi Company (Mount Pleasant, SC) - Employee

- Responsible for development and enhancement of the ultra low latency (on average 50 microseconds) and/or high frequency real time Trading systems in an Agile Environment
- Key member of a technology or infrastructure team responsible for retail and proprietary equity trading systems (More than a million lines of code)
- Worked on quote manager, order entry system, manning checks system and client proxies
- Enhanced the quote manager of Manning check system to pass obligation related information to Customer Order Status Service
- Developed a feature to enable Order Queue Position for PINKLINK and carried out changes to various components such as Order Entry System, Manning Checks System and Exchange Service
- Extended the scripting infrastructure to use the internal representation of stock symbol

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for the corporate actions
- Enhanced mock ECN to allow partial execution for IOC requests for the test environment
- Developed properietary implementation of Manning distance Calculation in a test driven fashion
- Removed the existing limit on number of positions a trader can take and modified the existing Ruby based test framework for Automated Brokerage Trading System
- Enhanced existing perl script to filter PINKLINKs from trade ahead reports as they are not customer orders
- Developed a script to sophisticate BAMBOO based build server to have an SVN branch for each successful daily build and copy the check-out to backup to facilitate operations
- Developed scripts to synchronize the test environment with production environment for corporate actions such as Bloomberg and Fidelity
- Technical Environment: C++, ACE, TAO, Boost, Perl, Ruby, Bamboo, JIRA, SVN, POSTGRES, SusE 10/11

Software Design Engineer (Windows Mobile for Automotive) May 2008- Feb 2009
Microsoft Corporation (Redmond, WA) - Consultant

- Responsible for enhancements and bug-fixing of Ford Sync Product
- Worked on Sync's module of Dr. Watson to successfully clean the file system and registry of dump files after every crash and reboot Sync successfully
- Reused and extended SDK samples to browse secured web sites on Ford's Sync platform using WININET APIs
- Re-factored the source code and Implemented Template Method Pattern for the SDK to browse secured and unsecured web sites
- Used smart pointers such as CComPtr to wrap the Bluetooth connection and avoid resource leaks
- Designed Exception Handling classes along with GetLastError to avoid goto statements and delivered production level code
- Development support at middleware layer for external bugs to the product
- Technical Environment: C++, WIN32, Multi-threading, COM, Visual Studio .NET 2005, Windows CE 6.0, Microsoft Product Studio, Microsoft Windows Vista, Source Depot

Application Developer (IPLM Initiative) August 2007- April 2008
Intel Corporation (Folsom, CA) - Consultant

- Responsible for enhancements to existing Siemens TeamCenter Products using J2EE technologies
- Developed a System Health Client Component for monitoring TeamCenter Project-Enterprise and Systems Engineering-Enterprise end to end functionalities using TeamCenter libraries and using Facade Pattern
- Developed and deployed JSP to measure the system performance such as response time from web tier using TeamCenter Systems Engineering Java Bean
- Developed database queries for operational and management indicators
- Object-oriented Design and implementation for Digital Health Group within TeamCenter Systems Engineering
- Exploited TCL API to parse TCSE objects internally stored in MHTML format
- Explored the TCSE performance bottleneck issues from Application Development Side
- Developed and optimized a JAVA application to populate the parsed HTML files from MS SQL Server Database using JDBC

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- Technical Environment: TCL, Java, JSP, JSF, TeamCenter Product Lifecycle Mangament Products, VSS, Netbeans 6.0, JDBC, MS SQL Server 2005

ACADEMIC PROJECTS

- Developed advanced Speech Recognizer
  I. Built a speech recognition system for isolated words and compared the performance of the Dynamic Time Warping (DTW, a non-probabilistic) approach to Hidden Markov Model (HMM, a probabilistic - Maximum Likelihood Estimation) approach for 14 dimensional feature set of microphone recorded words
  II. Completed an iterative implementation of the procedures for DTW, FB Training (Each Phoneme modeled with two states and each state with a Gaussian Mixture Model so that emission probabilities were continuous and avoided quantization error) and Viterbi Search for HMM
  III. Resulted in finding that HMM outperforms DTW in terms of speech recognition accuracy and DTW performance also dependent upon path heuristics
- Research on Feature Reduction with ANN Techniques
  I. Classified the images of Phoenix Metropolitan areas with Neural Network based approaches and achieved reduction in number of features of ANN with the classification accuracy above 90% on the test data set
  II. Selected RBFN as it has Best Approximation Property, Universal Approximation Theorem, a simple architecture for the training data set of 148 examples
  III. Reduced the 54 features to 3 and achieved the classification accuracy of 91%
- Developed Artificial Intelligence based Planning Systems
  I. Built state space planners such as STRIPS and Situation Calculus Planner in TCL or Prolog
  II. Chose the procedural approach (TCL) instead of declarative approach (of using Prolog Engine) so as to implement the unification algorithm and Top-Down Theorem Prover
- Developed and Evaluated naïve Bayes Classifier and SVM based solutions for spam detection of emails