

KUNDAN SEN

OBJECTIVE

A challenging position in application development that takes my development skills to the next level, while provides an agile environment and constant challenges of varying nature to keep me in a high learning curve.

QUALIFICATIONS

- 4 years of experience in end-to-end systems development at **Morgan Stanley**. Have successfully planned, coordinated and executed projects with clear delineation of schedule, cost and final deliverables.
- Over 4 years of experience in end-to-end systems development at **Citigroup** (formerly **Salomon Smith Barney**).
- **Rutgers, The State University of New Jersey**: MS in Electrical and Computer Engineering, October 2001 (3.82/4.00)
- **Indian Institute of Technology, Kharagpur, India**: B.Tech in Electrical Engineering, June 1998 (3.05/4.00)

WORK EXPERIENCE

*Senior Associate, **Morgan Stanley**, Operational Risk / Shared Services / Straight Through Processing Technology
January 2005 – current*

- Develop applications and systems used by Operations business users
- Roles and Responsibilities:
 - As a lead Java developer in the team, coordinated development across on-, near- and off-shore resources
 - Coordinated requirements discussions across a global Operations user base, acting as the NY spokesperson
 - Designed, developed and supported web applications and batch processing systems
 - Trained new members of the group and set up group-level development standards
 - Contributed heavily to community mailgroups on Java, Informatica, Linux, and general MS development
 - Represented the group in best practices meetings held at the department level
- Technology involved:
 - **Java 1.4-1.6**, using Eclipse IDE, and MS-proprietary Java application framework
 - **Java XML Broker (JXB)**, a MS-proprietary technology for transactional message processing via MQ
 - **Struts, Spring, XML, XSLT** as frameworks / structures
 - **Tomcat / Apache** as the platform for webapp deployment
 - **IBM MQ** and **XML** as the communication method between independent, agile systems
 - **Sybase 12.5.3** as the backend for all data requirements
 - **JRules version 5** to empower business users to manage application logic
 - **Quest SQL Tuning** and plain vanilla showplan options for **Sybase performance tuning**
 - **Informatica 7.1.3** for Extraction – Transformation – Loading (ETL) work
 - **Autosys** for scheduling, **Perl** jobs to fill in gaps in Informatica / JXB / Java processing
 - Performance tuning Java code using **Code Coverage, Find Bugs, JProfiler**
- Projects completed:
 - **Deficit Control System (defcon)**
 - A central, web-based tool that facilitates the tracking of all deficits for the company, across institutional and retail divisions. The system records and stores comments and actions taken towards deficit resolution on a global basis, with the data displayed from the prior day's close of business. An automated notification service follows up delinquent users, with automatic escalation if signoffs or remedial actions are not taken within a set timeframe.
 - After a huge overhaul of the existing application back in 2006, the application was handed over to Applications Support Group (ASG) – and has been running steady with zero issues since then
 - Java 1.4 web application, using Struts 1.1, deployed over Tomcat / Apache 5.0
 - **Position Exceptions Management (Poem)**
 - Traps nonsensical or erroneous positions or balances (for example, balance on a position-only account) to potentially prevent write-offs, fraud, regulations violations. Prompts users to correct erroneous data, thereby presenting a better picture of the Firm's positions and balances.
 - Processes 3 million accounts against 11 million positions and 3 million balances in about 15 minutes, producing roughly 2500 exceptions across all categories.

- Allows users to define pre- and post-processing filters to minimize noise. Filters are defined in a generic table template, using XPath and match operators to define queries
- Loosely coupled systems communicating over MQ / XML allows for easy scalability
- **Accounts Validation Engine (AVE)**
 - Collects master and auxiliary account data from various enterprise data sources, then cross-checks the consolidated data with a repository of pre-defined business rules on a daily basis. Ensures that all the accounts comply with the legal requirements of format and content. Invalid accounts raise exceptions which are collected and can be addressed later by notifying the appropriate users via emails.
 - Rules processed via JRules, with the users having control over the business rules via a web interface
 - Processes the full population of 1.2 million active accounts in the firm every day
- **Centralized data Repository (CDR)**
 - This is “data re-use”, a concept that I saw through from idea to fruition, this uses multiple technologies to pull data from their authoritative systems into a central database for OpsControl
 - Achieves tremendous economy of scale for all our systems, as well as those of the data providers, by avoiding multiple separate fetches of the same, or similar, information by various systems
 - Moving to a centralized structure allows better development focus and optimization
- **Supervision over Manual Journals (SoMJ)**
 - Manual journals are created on a daily basis for a variety of reasons. The SoMJ process goes through all these journals at the close of business for each region (Far East, Europe and US), looking for (and recording) evidence of supervisory controls, or prioritizing exceptions for supervisory review.
- **Responsibility Maintenance**
 - SOAP service to match up ownership information given a complicated hierarchy of accounts and ownership rules. Uses in-memory caches with synchronization mechanism across load-balanced servers.

*Senior Programmer Analyst, Citigroup Global Markets (Salomon Smith Barney), Securities Lending Systems Development
September 2000 – January 2005*

- Develop trading applications required for the Equity Finance desk, domestic and international.
- Roles and Responsibilities:
 - Gathered requirements from traders in New York, London, Tokyo, Frankfurt and Sydney, and prepared functional and technical documentation.
 - Developed prototypes and performed feasibility study with domestic and international users.
 - End-to-end design, implementation, testing, user acceptance and support; GUI and database optimization and performance tuning.
- **Technology involved:**
 - Multi-threaded **Java/Swing** front end with trade entry screens and real-time tables (uses **Sitraka/ Quest DesktopViews** package) developed using **Eclipse IDE**, tuned by **JProfiler** and **Borland Optimizelt**.
 - **Java servlets** deployed through **Macromedia JRun; HTML/Perl/CGI, Actuate 6.0** web-based reports
 - **Sybase 12.5** database; Sybase replication for real-time feed from external systems.
 - **Autosys batch process** and **Perl scripts** for end-of-day data loads from external (international) systems.
 - **TWiki** document collaboration system, **Apache** webserver management,
 - Customized version of **Mantis (PHP, MySQL)** open-source bug tracking system.

*Graduate Assistant, Rutgers University, Laboratory for Visiometrics and Modeling
January 1999 – September 2000*

- **MS Thesis work:**
 - Design and implementation of an animation/ visualization system for massive datasets (volumes): Number-cruncher program to work through GigaBytes of data, involving massive matrix transformations, disk I/O, and custom designed tree structures, using C/C++/Unix (Irix). Performance optimization of the same, using several generic as well as specific methods.

*Software Engineer, Vedika International Private Limited, Calcutta, India
June 1998 – December 1998*

- Worked in client implementation of web-based accounting package, ‘FactFire’, using Java front end and CORBA link to C++ back end.