

## Swati Kumar

**Address:** 55 Trumbull St, Apt 6, San Francisco, CA **Phone:** 917-239-5847 **Email:** [sak2144@columbia.edu](mailto:sak2144@columbia.edu)

### Education

**Columbia University, Fu Foundation School of Engineering and Applied Science** New York, NY  
MS Computer Science December 2008

**University of Mumbai** Mumbai, India  
BE in Computer Engineering June 2006

### Professional Experience

**Groupon Inc, Palo Alto, CA** Apr 2013 – Present  
Groupon API Team

- Led the effort to re-write several REST API endpoints to a new framework built upon **Vert.x with Java**. It made our response times for several endpoints 10X faster while at the same time reducing the physical hardware by 40% from the Ruby on Rails stack.
- Designed and developed **API Proxy** that sits as a layer above the public facing endpoints and provides SSL termination, rate limiting, client throttling, traffic shaping and addition of default headers out of the box.
- Managed a team of 3 people and introduced several improvements to existing project management like using scrums and dashboards for visibility with focus on an environment for ownership of features by developers
- Coordinated with several teams both clients and backend to develop new features and endpoints
- Owned development, testing and deployment of several key features and endpoints from start to the finish including providing graphing and monitoring for them

**Barclays Capital, New York, NY** Mar 2009 – Apr 2013  
**Cash Equities - Tiger** Mar 2011 – Apr 2013

- Designed and developed a desktop based GUI for trade entry and ticketing for cash and options trades supported by an order management system using **Java and Java Swing**
- Instrumental in adding new flows like sales to trader and sales/trader to broker with timestamp based ticketing
- Regularly interacted with sales and position traders and built relationship them, requirements gathering, prototyping new features and user training on the trading floor
- Led the effort to build tools for support teams like request logs and user monitor tool, mentored new team mates and supported the application with bug-fixes and troubleshooting issues
- Managed release process and coordinated with QA, support and Dev teams for bi-weekly releases

### Barclays Graduate Rotation Program

**1. Research IT** Sept 2010 – Feb 2011

- Developed bond calculators for Brazilian and South African inflation-linked bonds used for finding values like yield, volatility and so on using **C++ and XML**
- Developed scripts for extracting past expiry information for inflation linked bonds using **Perl**

**2. Prime Services Synthetics** Apr 2010 – Aug 2010

- Built reports detailing the position, activity and dividends of equity swap trades for various clients using a Sybase data warehouse. Developed stored procedures for extracting data using **SQL**
- Developed install and build scripts for installing and packaging the equity swap management system (Delta1) using **Perl**

**3. IT Operations – Reconciliation System** Sept 2009 – Mar 2010

- Designed and developed a centralized system for collecting “breaks” from reconciliation systems or manual file uploads using **Java with Spring and Hibernate**
- Used by Operations team to run reports to analyze various trends like total number of daily breaks based on different input parameters like account name, user name
- Successfully gathered requirements, built the engine and released it to the users. Coordinated support activities for the in house reconciliation engine and built reconciliation rules

**4. Cash Equities** Mar 2009 – Jul 2009

- Developed tools to perform administrative tasks like setup user accounts and configuration, filter orders from other users and quality control for market data feeds using **Java and Java Swing**
- Valuable in refactoring the source code to modularize it by exploiting the Java OO features of abstraction and inheritance
- Coordinated efforts in packaging and releasing the application for London users

## 5. Fixed Income, Rates (Intern)

Summer 2008

- Designed web based **Trade Support Tool** for Interest Rate swaps that helped developers, traders and support team in **quick access** and **analysis** of trade data, using **JSP and Java**
- Represented raw XML and log file data in tabular and tree formats that helped identify errors during testing and enhancement of the trade capture workflow system
- Followed software development methods and made extensive use of prototypes and UI design techniques

## Software Engineer, Infosys Technologies Ltd, Pune, India

Jun 2006 – Jul 2007

- Developed the Decision Table functionality for Interstage Business Process Management (IBPM), a workflow management tool
- Performed testing and bug fixing for UI and server using Junit scripts

## Technical Skills

---

**Languages:** Java, C++, C, SQL, XML, Hibernate, Spring Framework, VertX

**Web technology:** JavaScript, JSP

**Databases:** MySql, SQL 2003/2005, Oracle 10g

## Relevant Projects

---

### Research Projects

Spam Analysis and Reputation Project

**Columbia University**

- Gathered statistical data about the fields present in email header and body that can be used to distinguish between non-spam and spam mails using **Java**.
- Analyzed which fields act as strong filters for spam mails and generated inference that can be used to strengthen the spam protection engines.

## Achievements

---

- Awarded the outside the box project award for Groupon Hackathon **Groupon**
- Winner of the Barclays Evolution Challenge – an outside of work opportunity to present an idea valuable to the bank **Barclays Capital**
- Awarded TA Fellowship for excellent performance as Teaching Assistant **Columbia University**