kmsomani@ncsu.edu | (919) 985–5701   **Kapil Somani**   linkedin.com/in/kapilsomani

Education

Masters in Computer Science,
North Carolina State University, Raleigh.

December 2015
GPA : **3.67/4.00**

Bachelor of Engineering (*Information Technology*),
Maharashtra Institute of Technology, Pune.

June 2012
GPA : **3.80/4.00***(Distinction)*

Technical Skills

Languages	**:**	C, C++, Java, Python, SQL, Shell Scripting, R, VBScript
Web Development	**:**	HTML, CSS, JavaScript, jQuery, PHP, NodeJS, jade
Tools	**:**	NetBeans, LaTex, Git, MS Excel macro, Eclipse, R Studio, Xcode, Toad, TIBCO BW, Redis
Frameworks	**:**	Express for NodeJS, OpenGL API, WebSpeech API, Apache Storm, CodeIgniter, WordPress

Work Experience

Accenture Services Private Limited,
as *Associate Software Engineer*

November 2012 - March 2014

- Designed SQL scripts with Data Alignment team to proactively detect and remediate misaligned records between Siebel CRM and Kenan BRM systems, in order to reduce revenue losses to client business.
- Independently designed multiple *automations, scripts and macros*, which led to around <u>ten-fold</u> increase in *team efficiency*, by using *Business Management tools* like TIBCO BusinessWorks.

Projects

- *Social Studio*
  - A web based application which enables user to browse through their social media feeds from Twitter, Facebook, Instagram, etc. and like, retweet, comment, reply on posts using *hand gestures* and *voice commands*.
- *Rate My Movie*
  - A *R package* which streams movie reviews from Rotten Tomatoes and classifies the movie based on text content of the reviews.
  - Classification is achieved using various models such Naïve Bayes, Lexical Analysis and Term Document with feedback mechanism.
- *Twitter Sentiment Analysis*
  - A web application built using NodeJS which *streams real-time twitter data* and analyzes it to determine the sentiment based on love/hate keywords.
  - Application uses node modules *ntwitter* and *socket.io* to fetch and display the tweets and notify sentiments from the stream.
- *Space Invaders 3D*
  - A 3D version of classic game Space Invaders using *OpenGL* library.
  - The game features multiple levels, power-ups, shooting aliens, deteriorating barricades, scoring and multiple lives.
- *Ledger System using PHP*
  - A *XAMPP*-based application designed for a local wine shop, to keep track of inventory, and generate sales/purchases reports.
- *Operating System Projects*
  - Designed a non-preemptive multi-threaded library using *context switches*.
  - Developed a *micro-shell* (similar to C shell) to simulate behavior of basic system calls.
  - Designed a persistent *File Management System* using *FUSE* to support basic file operations like creation, modification, deletion, etc.
- *Breaking of CAPTCHA to Measure its Strength*
  - A Java application which extracts text from CAPTCHA images. Vulnerabilities in CAPTCHA images (which are still used by many websites) were highlighted by breaking some CAPTCHAs.
  - Image preprocessing techniques were used to remove noises from the CAPTCHA image; segmentation and skeletonization helped extraction of characters which were later fed to trained neural network for recognition.

Awards and Achievements

- ***Rising Star Award*** at *Accenture Stellar Awards-Q2, 2013* for redesigning the routine manual work into a fully independent automation.
- 1st Prize at Project Competition at *Birla Institute of Technology and Science*, Apogee 2012, Pilani, Rajasthan.
- 1st Prize at Project Competition and Paper Presentation at *Cummins College of Engineering for Women*, Innovation 2012, Pune.