# Sandeep Raju Prabhakar

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Open to relocation across United States

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## Education

**Northwestern University** - Evanston, IL                                                    Expected Dec 2016
Master of Science in Computer Science - GPA: 3.93 / 4.00

**PES University** - Bangalore, India                                                                       Jun 2013
Bachelor of Engineering in Computer Science - GPA: 8.50 / 10.00

## Technical Skills

**Programming:**
- ❏ **Proficient:** Python, SQL, HTML, CSS
- ❏ **Familiar:** JavaScript, Java, Go, C, C++, BASH, PHP

**Design / User Experience:** Adobe Photoshop, Balasmiq

**Other Technologies:**
- ❏ **Proficient:** Django, Flask, Ionic, PostgreSQL, Redis, Git, Emacs, Linux CLI
- ❏ **Familiar:** NodeJS, ReactJS, Spring boot, MongoDB, MySQL, AWS, Heroku, Bootstrap, AngularJS, WordPress

## Work Experience

**Expedia, Inc.** - Chicago, IL                                                                   Jun 2016 - current
*Software Development Engineering Intern (Expedia Worldwide Engineering team)*
- ❏ Developed hotel booking reconciliation tool in Java Spring Boot on AWS that monitors ghost bookings in the inventory.
- ❏ Developing the Front-end for property management tool using ReactJS that will bring down the page load time significantly.

**Foodrop, Inc.** - The Garage, Northwestern University, Evanston, IL                              Jan 2016 - current
*Co-founder and Lead Software Engineer*
- ❏ Co-founded Foodrop, an aggregated food ordering platform run by students as a part of NUvention entrepreneurship course.
- ❏ Designed and built the backend infrastructure along with the mobile application that powers the platform.
- ❏ Processed 300+ orders in a two-week trial run in spring 2016 at Kellogg School of Management, Northwestern University.

**Introduction to Programming (Python)** - Northwestern University, EECS Department, Evanston, IL    Jan 2016 - Mar 2016
*Teaching Assistant*
- ❏ Conducted recitation sessions for a class of 52 to review the course content & discuss the assignments.
- ❏ Held office hours to help students, provided feedback on course content to instructor and prepared content for assignments.

**Plivo, Inc. (YC S12)** - Bangalore, India                                                       Jun 2013 - Aug 2015
*Product Engineer*
- ❏ Was part of a three member Product Engineering team responsible for architecting, building and scaling the platform.
- ❏ Authored an open source rate limit queuing system called SHARQ (http://sharq.io/).
- ❏ Developed a distributed Call & SMS dispatch system; led the process of porting the SMS routing and billing system to Golang.

**Shippr.in** - Bangalore, India                                                                  Jan 2015 - Aug 2015
*Software Development Consultant*
- ❏ Developed the real-time vehicle tracking framework in NodeJS, SocketIO and Redis.
- ❏ Designed the backend architecture and the REST APIs using Django REST Framework.

**Practo Technologies** - Bangalore, India                                                        Jan 2013 - May 2013
*Software Engineering Intern*
- ❏ Developed the server side PUSH notification backend for Practo Hello mobile application.
- ❏ Integrated a cloud telephony service provider to Practo Hello web application.

**Alphamatters Advisors** - Bangalore, India                                                      Nov 2012 - Dec 2012
*Software Engineering Intern*
- ❏ Developed SOAP & REST APIs for their core stock prediction system.
- ❏ Plotting and regression analysis of stock market data in realtime.

## Project Experience

**Sulley: An open source framework for building SMS bots** - Evanston, IL          Apr 2016 - Jun 2016
*Author*
- ❏ Developing a framework to help developers build SMS bots with very few files of Python code.
- ❏ Currently supports two major SMS providers (Twilio & Plivo) that can be seamlessly switched.
- ❏ Future plan is to add plugin support to the framework to make integrations easy.

**Keep It Fresh: Predicting Restaurant Inspections** - EECS Department, Northwestern University, Evanston, IL    Apr 2016 - Jun 2016
*Software Developer*
- ❏ Worked towards predicting restaurant health violations using open data from Yelp and City of Boston.
- ❏ Evaluated and implemented machine learning techniques like SVM, Bayes Nets, Decision Trees and Neural Networks.

**Python Data Workflow Framework** - EECS Department, Northwestern University, Evanston, IL          Jan 2016 - Mar 2016
*Researcher & Software Developer*
- ❏ Worked towards evaluating machine learning libraries that support online learning to aid a mobile security project with Tencent Inc, to model mobile phone usage patterns to classify the mobile phone user as 'owner or not'.
- ❏ Developed a data workflow framework on top of Vowpal Wabbit to help run large scale experiments.
- ❏ The results of this research has been submitted to the 'Computer and Communications Security (CCS 2016)' ACM conference.

**SHARQ: An open source rate limiting queuing system** - Plivo Inc., India, Bangalore          Jul 2014 - Aug 2014
*Author*
- ❏ Architected and implemented a rate limiting queue based on the novel approach by Alan Shreve.
- ❏ The project was eventually open sourced and currently available at http://sharq.io and Github.
- ❏ A few startups are using SHARQ in their infrastructure as of today.

**Web based Telephony System on a Private Cloud** - PES University, India, Bangalore          Jan 2013 - May 2013
*Software Developer*
- ❏ Created a platform to abstract the process of managing a telephony infrastructure on private cloud.
- ❏ Designed a technique to offload call-flow logic to a system connected over the network.
- ❏ Prototyped a new JSON based format to represent a call flow or an IVR.

**A Weight-based Personalized Recommendation System for Movies** - PES University, India, Bangalore          Aug 2012 - Dec 2012
*Researcher & Software Developer*
- ❏ Created a weight based recommendation system using graph as the primary data-structure.
- ❏ A prototypical movie explorer software was built to survey the effectiveness of the algorithm.
- ❏ Findings of the research received critical reviews and invaluable feedback from WWW2014 reviewers.

## Conference and Workshop Presentations

**PyCon India 2014** - Bangalore, India          Sept 2014
*Technical Speaker*
- ❏ Selected from a pool of more than hundred talk proposal to present my project at PyCon India 2014.
- ❏ Presented a talk titled "SHARQ - An API queueing system built at Plivo!" based on the project I authored.

**PES Open Source: Tech Thursdays** - PES University, Bangalore, India          Feb 2013
*Workshop Presenter*
- ❏ Conducted a technical hands-on workshop on "Git - the distributed version control system".
- ❏ Handled topics from basics like add, commit to advanced topics like Git workflow, interactive rebase, Git bisect, Git reverts.

**Student Nokia Developer Workshop** - IIIT-B, Bangalore, India          July 2012
*Workshop Presenter*
- ❏ Conducted a day-long workshop on building user interface components using Adobe Photoshop.
- ❏ The workshop was attended by more than hundred students from universities all over India.

## Awards and Scholarships

**Distinction Awards** - PES University, Bangalore, India          Aug 2009 - Jun 2013
- ❏ For academic excellence in multiple semesters during undergraduate studies.

**MHRD Scholarship** - Government of India, India          Aug 2009
- ❏ For academic excellence by securing high score in the Pre-University examination.