

# Sandeep Raju Prabhakar

+1 (224) 509 0292

SandeepPrabhakar2015@u.northwestern.edu

Seeking full-time opportunities starting Jan, 2017. Open to relocation across United States.

Github://sandeeppraju

Linkedin://sandeepprajup

Twitter://@sandeepprajup

## 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:** C, Java, JavaScript, Go, C++, BASH, PHP

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

### 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 - Sept 2016

*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.
- ☐ Developed the property management portal using ReactJS, jQuery, Java Spring Boot & MongoDB and deployed on AWS.

**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 Python backend infrastructure along with the [iOS](#) and [Android](#) mobile app 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/>) in Python for the SMS infrastructure at Plivo.
- ☐ Developed a distributed Call & SMS dispatcher in Python; led the process of porting the SMS routing & billing system to Golang.

**Shippr.in** - Bangalore, India

Jan 2015 - Aug 2015

*Software Development Consultant*

- ☐ Developed the real-time vehicle tracking system in NodeJS, SocketIO and Redis used by Shippr driver's android application.
- ☐ Designed the backend architecture and the REST APIs using Django REST framework currently used by clients like [Snapdeal](#).

**Practo Technologies** - Bangalore, India

Jan 2013 - May 2013

*Software Engineering Intern*

- ☐ Developed the PUSH notification backend for Practo Hello mobile application used by thousands of doctors across India.
- ☐ Integrated a cloud telephony provider ([KooKoo](#)) to Practo Hello web application to help doctors manage virtual phones.

**Alphamatters Advisors** - Bangalore, India

Nov 2012 - Dec 2012

*Software Engineering Intern*

- ☐ Developed SOAP & REST APIs in PHP and a micro server in Python talking to MATLAB for their core stock prediction system.
- ☐ Plotting the regression analysis of stock market data in realtime using SocketIO and nvd3.js.

## Project Experience

**Sulley: An open source framework for building SMS bots** - Evanston, IL

Apr 2016 - Jun 2016

*Author*

- ☐ Developed a framework to help developers build SMS bots using Twilio or Plivo with a very few lines of Python code.
- ☐ Lets the user perform generic tasks over SMS by defining commands bound to functions using Python decorators.
- ☐ Future plan is to create access control and admin commands to manage the bot remotely using SMS.

**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 data from Yelp and City of Boston health violation history.
- ☐ Evaluated and implemented machine learning techniques like Decision Trees and Neural Networks in Python.

**Python Data Workflow Framework for RISKCOG** - EECS Department, Northwestern University, Evanston, IL

Jan 2016 - current

*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 imposter.'
- ☐ Developing a data workflow framework on top of Tensorflow 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 conceived by [Alan Shreve](#).
- ☐ The project, written in Python using Gevent and Flask on Redis is open source and available at <http://sharq.io> and [Github](#).
- ☐ A few startups including Plivo are using SHARQ in their infrastructure as of today for throttling generic jobs.

**Web based Telephony System on a Private Cloud** - PES University, India, Bangalore

Jan 2013 - May 2013

*Software Developer*

- ☐ Created a tool using Python and Asterisk to abstract the process of managing a telephony infrastructure on private cloud.
- ☐ Developed an IVR builder interface and backend server 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 similar to today's Twilio's TwiML or Plivo XML.

**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 using Python networkX package.
- ☐ A prototypical movie explorer software was built in Qt C++ to survey the effectiveness of the algorithm with real users.
- ☐ 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 revert.

**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 and Corel Draw.
- ☐ The hands-on workshop was attended by more than hundred students and professionals from 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.