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, C, Java, Go, 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 front-end for the property portal using ReactJS that is set to 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 iOS and Android 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/) for the SMS infrastructure at Plivo.
- ❑ 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 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 - 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 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.