Sandeep Raju Prabhakar

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Education

Northwestern University - 633 Clark Street, Evanston, IL 60208   16 Dec 2016
Master of Science in Computer Science - GPA: 3.94 / 4.00

PES Institute of Technology - 100 Feet Ring Road, BSK III Stage, Bangalore - 560085, India   04 May 2014
Bachelor of Engineering in Computer Science - GPA: 8.50 / 10.00

Technical Skills

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

Design / User Experience: Adobe Photoshop, Balasmiq

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

Work Experience

Salesforce.com, Inc. - Palo Alto, CA   09 Jan 2017 - Current
SalesforceIQ - Member of Technical Staff
- ❏ Developing an event stream processing data platform that powers the product - SalesforceIQ Inbox.
- ❏ Generate Insights among large amounts of events using technologies like Apache Spark & Scala.
- ❏ Built scalable HTTPS REST API using Kotlin & JAX-RS with PostgreSQL for powering multiple products across Salesforce.
- ❏ Architect, implement & deploy a scalable rule processing using Drools Java framework for triggering alerts based on events.

Expedia, Inc. - Chicago, IL   13 Jun 2016 - 02 Sept 2016
Software Development Engineering Intern
- ❏ 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.

Plivo, Inc. - Bangalore, India   07 Jun 2013 - 14 Aug 2015
Software 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 Call & SMS dispatcher in Python; led the process of porting the SMS routing & billing system to Golang.

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

Apache Spark Bay Area Meetup - Palo Alto, United States   May 2017
Technical Speaker
- ❏ Presented a talk titled "Dependency injection in Apache Spark Applications" based on an internal project at Salesforce
- ❏ Introduced a novel way to inject dependencies in a distributed Apache Spark applications using Guice.

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.