

Sandeep Raju Prabhakar

sandeep.r.prabhakar@gmail.com

Github://sandeeppraju
LinkedIn://sandeepprajup
Twitter://@sandeepprajup

Technical Skills

Programming:

- ❑ **Proficient:** Java, Kotlin, Python, SQL
- ❑ **Familiar:** Golang, Scala, JavaScript, BASH, HTML, CSS, C/C++

Other Technologies:

- ❑ **Proficient:** AWS, Apache Spark, Kafka & Kafka Streams, Docker, Maven, Postgres, Redis
- ❑ **Familiar:** Elasticsearch, C*, Tensorflow & Keras, Spring, Kubernetes

Work Experience

Amazon.com, Inc. - Sunnyvale, CA 04 Nov 2019 - Current
Software Engineer - Big Data Technologies

- ❑ Leading the initiative to architect a big data discovery and exploration platform for datasets across Amazon, worldwide.
- ❑ Feature development on exabyte scale big data ingestion platform in Java.

Salesforce.com, Inc. - Palo Alto, CA 09 Jan 2017 - 01 Nov 2019
Senior Member of Technical Staff

- ❑ As a part of the founding member of this team, developed a data platform to power "Einstein Insights" for "Salesforce Inbox".
- ❑ Built real-time data pipelines using Kafka, Apache Spark (Scala) and PostgreSQL to process ~100M events/day.
- ❑ Architected and developed kafka-streams based data pipeline that powers engagement & alerts for "Salesforce Einstein".
- ❑ Developed an in-house job workflow scheduler called Alcatraz and led the migration of Apache Spark jobs to it.
- ❑ Built scalable GraphQL AP using Kotlin, C* and PostgreSQL to power "Salesforce Inbox" mobile application.

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

- ❑ Developed hotel booking reconciliation tool in Spring Boot on AWS that monitors "ghost bookings" in the inventory.
- ❑ Developed the property management portal using ReactJS, 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.

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

Academic, Professional and Personal Projects

Foodrop, Inc. - Northwestern University, Evanston, IL Jun 2016 - Dec 2016
Co-founder and Lead Software Engineer

- ❑ Conceived and built Foodrop, an aggregated meal delivery startup as a part of NUvention entrepreneurship program.
- ❑ Developed backend ordering and dispatch platform using Python & Parse BaaS and iOS & Android applications with Ionic.
- ❑ Profitable from the first week of operations; served more than 500+ customers with ~100 orders/day for 6 months.
- ❑ One of the few startups to be featured on the coveted "[Ideas @ Northwestern](#)" list.

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 very few lines of Python code.
- ❑ Lets the user perform generic tasks over SMS by defining commands bound to functions using Python decorators.
- ❑ Sulley was used to power SMS notifications and implement order confirmation for Foodrop.

Python Data Workflow Framework for RISKCOG - EECS Department, Northwestern University, Evanston, IL Jan 2016 - Dec 2018

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.
- ❑ Developed a data workflow framework on top of Tensorflow to help run large scale experiments for thousands of users.
- ❑ The [results of this research](#) is published as a preprint in "IEEE Transactions on Mobile Computing 2019".

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 flexible throttling.

Conference and Workshop Presentations

RiskCog: Unobtrusive Real-time User Authentication on Mobile Devices - IEEE Transactions on Mobile Computing Jan 2019

Researcher & Co-author

- ❑ Worked on achieving user authentication based on mobile phone usage pattern during masters at Northwestern.
- ❑ This work appeared in "IEEE Transactions on Mobile Computing 2019" (DOI 10.1109/TMC.2019.2892440).

Kotlin @ Activity Insights - Salesforce, San Francisco, United States Jul 2018

Technical Speaker

- ❑ Presented a talk on my experience of using Kotlin at Activity Insights since early 2016.
- ❑ The talk was attended by almost all Salesforce Sales Cloud Architects and many Principal Engineers across the company.

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 distributed Apache Spark applications using Guice.

PyCon India 2014 - Bangalore, India Sept 2014

Technical Speaker

- ❑ Selected from a pool of more than hundred talk proposals 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.

Patents, Awards and Scholarships

Patent #20190140995: Action response selection based on communication message analysis - Salesforce, Palo Alto May 2019

- ❑ For the email insight generation pipeline built to power "Salesforce Inbox".

Most Heroic Hack @ SalesforceIQ Hackday 2018 - Salesforce, Palo Alto May 2018

- ❑ For working on a PoC using OpenFaas and Apache Kafka to build a new way for generating email Insights.

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 scores in the Pre-University examination.