

Akshay Rao Arun Kumar

akshayrao557@gmail.com | [linkedin.com/in/akshayrao557/](https://www.linkedin.com/in/akshayrao557/) | (480)-565-0603

EDUCATION

- Arizona State University, Tempe, Arizona** GPA: 4/4
May 2020
Master's in Computer Science (MCS Big Data Systems)
Courses: Cloud Computing, Distributed Database Systems, Data Mining, Data Visualization, DBMS Implementation, Software Security
- M S Ramaiah Institute of Technology, Bangalore, India** GPA: 9.38/10
June 2016
Bachelor of Engineering in Information Science and Engineering
Courses: Software Engineering, Software Design Patterns, Unix Programming

WORK EXPERIENCE

American Express | Software Development Engineer Intern – Cloud Systems Jun 19 - Aug 19

Enterprise Cloud Platform Chargeback Model [Docker, Google Kubernetes Engine, Data Studio, Spring Boot, Google BigQuery]

- Designed and implemented an elastic chargeback application that provides usage and cost metrics at an application level within Google Kubernetes Engine
- Implemented resource usage and cost prediction using random forest nonlinear regression model (~93% accuracy)
- Built microservices using Spring Boot and data visualizations using Google Data Studio

Cisco Systems | Software Engineer Aug 16 - Jul 18

Next-gen Forecasting – Metadata Driven Architecture [Datastax GraphDB, Cassandra, Mulesoft, Java, RabbitMQ, SQL]

- Implemented Sales Forecasting capability from scratch as a backend developer, and delivered it to production
- Developed web services (REST API endpoints) using Mulesoft and Java for use across Cisco and all SFDC sandboxes
- Handled asynchronous data writes to Graph DB and Cassandra using RabbitMQ

Digital Selling Experience [AngularJS, Node.js, nvd3.js, Mulesoft, RabbitMQ, PL/SQL]

- Implemented a Sales Trend dashboard as a full stack developer, thereby helping a Cisco's sales' 17k workforce
- Designed and developed the frontend (UI) using AngularJS, Node.js, and nvd3.js
- Owned the service layer by developing web services (REST API endpoints) using Mulesoft

Cisco Systems | Software Engineer Intern Jan 16 - Jul 16

Email2DB Replacement – Email Services [Salesforce.com (SFDC)]

- Replaced legacy Email-to-Case platform with SFDC, thereby providing a single source of truth
- Handled 5 million emails/year across ~400 support queues, saving \$500k in licensing fees, \$128k/year in support costs
- Used Apex, SOQL, and SFDC Email Services to create and manage the case routing engine

ACADEMIC PROJECTS

Influence Flowers [D3.js, Python, Django, SQLite] Sept 19 - Nov 19

- Developed a web app depicting Influence flowers of academic entities implementation on Airbnb and IMDB datasets
- Extended Influence flowers visualization to provide multi-level influence representation among entities such as cities and neighbourhoods, films and directors
- Enabled additional customization through user configurable filter options

Implementation of Semi-Structured DBMS [Java] Feb 19 - May 19

- Implemented an XML Parser and a semi-structured DBMS that return 3 optimized query plans
- Implemented physical operations to process complex queries that operate on the results of pattern trees
- Additional query execution optimizations resulted in improving the performance by >=2sec/XML query

Picture Bistro [Google App Engine, Storage, Firestore, Cloud Functions, Vision API] Apr 19 - May 19

- Developed an elastic web application that performs food detection from an image using Google vision API
- Provides restaurant and recipe recommendation using Yelp and Edamam API on the food labels detected

Autoscaling Object Detection Application using AWS [AWS EC2, S3, SQS, Elastic IP] Mar 19 - Apr 19

- Developed an elastic application using AWS cloud resources that provides a video surveillance system which performs object detection on IoT video feeds in real-time
- Video detection was implemented using a community AMI

Secure Banking Application [Vue.js, Java, Spring framework, SQL] Mar 19 - Apr 19

- Lead a group of 9 members in building a secure banking application with a focus on security

TECHNICAL SKILLS

- Programming:** Java, C++, Python
- Databases:** Oracle PL/SQL, Cassandra, GraphDB
- Cloud Technologies:** AWS EC2, S3, SQS, Google App Engine, GCP, Firestore, BigQuery
- Tools/Framework:** Hadoop, D3.js, Spring Boot, Mulesoft, SFDC, Toad, Jenkins, Rally, GIT