

# SUMIT KUMAR

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## TECHNICAL SKILLS

Languages	Java, Python, MATLAB, PL/Sql, Shell(Bash)
Backend	REST, Apache Tomcat, Nginx, Redis Queue, Docker
Databases	MySQL, MongoDB, Oracle
Frameworks	Django, Android, D3.js, Apache Spark, Hadoop
Tools	Git, Gradle, Maven, IntelliJ, AWS, Google App Engine, Firebase
Machine Learning	Regression, Feature Selection, Reinforcement Learning, Naive Bayes, SVM

## ACADEMIC EXPERIENCE & PROJECTS

### Tomnet Center, ASU, Tempe, Arizona

📅 Aug 2017 - Present

#### Research Assistant (*Django, Python, AWS, Nginx, Redis Queue*)

- Developed distributed Webapp for PopGen software, using AWS Implemented Full fledged REST API, and Cache ,and improving the efficiency of underline algorithm to decrease the running time of the software using CUDA.
- Implemented scalability, load balancing of both Webapp and backend using Distributed Queue and Docker.

### ASU-Mayo Clinic Informatics Laboratory

📅 May 2017 - July 2017

#### Machine Learning Developer(Volunteer) (*Python, Sklearn, Matplotlib, Pandas, Numpy, Machine Learning*)

- Developed Feature Selection tool for Clinical Practitioners to identify relevant features for high dimension data.
- Designed and implemented in-house Pipeline Algorithm for Feature Selection to improve accuracy using Sequential Forward Selection, Lasso, Elastic Net, Mutual Information and Entropy.

### Deloitte Consulting, Gurgaon, India

📅 Jun 2015 - Dec 2016

#### Technology Consultant (*Data Warehouse, ETL, PL/SQL*)

- Designed and implemented end to end Data Warehouse systems using ETL Tools, shell scripting and performance tuning the database. This solution highly improved data quality, error handling and reduced manual intervention.
- Led Data Warehouse Framework, Architecture Design of the solution that included data profiling and quality.

### Accenture, Bangalore, India

📅 July 2011 - Jun 2015

#### Software Engineering Analyst (*ERP, Business Intelligence, Mainframe, PL/SQL*)

- Developed and implemented SOA Mainframe application, improved ERP and Business Intelligence reporting solutions.
- Implemented automation in Data warehouse using SAP Data Services, HANA, increased efficiency, speed of the solution.

## ACADEMIC PROJECTS

### Cloud Pi

REST, Amazon Web Services, IaaS, AWS Java API, C

- Built an elastic, scalable SAAS service application using Amazon IaaS to calculate the value of 'Pi' using SFFT C program.
- Used Java API to create AWS EC2 instance for Application and Web tier, S3 buckets to store large data-set, EBS Snapshots to create EC2 on demand and Simple Queue Service (queue) for handling multiple requests simultaneously.

### Cross-Site Scripting (XSS) Filter

Python, PHP, HTML, MySQL,

- Developed and designed a tool that can be used by a naive developer or existing server admin who has no experience in web security to protect the application from XSS, SQL Injection attacks, OS command injection.

### Pacman Project

Artificial Intelligence, Python

- Implemented an intelligence techniques like reinforcement learning, heuristic searches and Markov decision processes so that Pacman wins intelligently against a random ghost.

### Free-Cast

Android Studio, Google Cloud Services, Google App Engine Java API, Firebase

- Created an android app which helped the user to send push notifications to other users which included details of an event like location, freebie type, availability etc. with minimal input from user. It uses Google cloud messaging for now but can be easily migrated to Firebase.

### Other Projects

- Electronic Health Record using Alexa (AWS Lambda, Python, Hack Arizona - MLH 2017 season) • Geospatial Operations Apache Spark and Hadoop • Reflector program Redirect Ethernet/IP layer based attack on a host towards attacker using simple but efficient networking techniques.

## EDUCATION

### Master of Computer Science

📅 Jan 2017 - Aug 2018(Early Graduate) or Dec 2018

Arizona State University, Tempe, Arizona, GPA: 3.56/4.0

### Bachelor of Technology, Computer Science & Engineering

📅 Jul 2007 - Jun 2011

Jaypee University Of Engineering & Technology, Guna, India, GPA: 6.2/10