

# Viraj Nilakh

San Jose. CA. 95110

[www.linkedin.com/in/virajnilakh](https://www.linkedin.com/in/virajnilakh)

Github: <https://github.com/virajnilakh>

Mobile: (408)409-9371

Email: [viraj.nilakh@sjsu.edu](mailto:viraj.nilakh@sjsu.edu)

---

## EDUCATION

**Masters in Software Engineering**, San Jose State University  
**Bachelors in Information Technology**, Mumbai University

**Graduation: May 2018 / GPA:3.82**  
**Graduation: June 2015 / GPA:3.02**

## TECHNICAL SKILLS

**Programming Languages:** Java, JavaScript, Python, PHP, GO, C#, C++

**Technologies:** NodeJS, SpringBoot, Hibernate, Express, React, Angular, Tomcat, EJS, D3 Js, Groovy, Grails, Restlet, MongoDB, AR/VR/MR, MySQL, Netty, Protobuf, OpenMP, JavaServlets, Redis, Cassandra, AJAX, JQuery, Flask, SQLAlchemy.

**Applications:** Docker, Git, IntelliJ, Pycharm, Unity, Eclipse, Unity, Visual Studio, Android Studio, Sublime, NetBeans

**Cloud Technologies:** Cloud9, AWS Lambda, EC2, S3, DynamoDB, Heroku, Docker cloud, Firebase.

**OS:** Windows, Linux, Mac **Tools:** Git, Bash, Selenium, Appium, Test Rail, Jira, Weka.

## COURSES

Virtual Reality, Enterprise Distributed Systems, Cloud Technologies, Software Systems Engineering, Enterprise Software Overview, Enterprise Application Development, Software Quality Assurance and Testing, Web and Data Mining.

## PROFESSIONAL EXPERIENCE

**Software Intern, N3N Inc.- San Jose, CA** (Full Stack )

**July 17- Present**

**Rule Engine** Bootstrap | EJS | Express | NodeJs | Ajax | JQuery | Mongoose | Big data | Spark

- Developed a full stack web application to visualize IOT devices as graphical nodes.
- Manipulating API responses of these IOT devices by attaching user-defined functions, graphically, as nodes.
- Storing this graphical node configuration in MongoDB to apply them on Big data as worker threads.
- Binding the output of these worker threads to data-visualization UI creator tool, which is under development.

**HoloLens Data-Visualization C# | AR (Present)**

- Developing a data visualization solution in Augmented-Reality using HoloLens.
- Integrating data from different sources and formats into single pane of glass for monitoring, alerting and evaluation.
- Interacting with the 3D data like real world objects and making informed business decisions using it.

**Data-Visualization UI Creator Tool** React | Redux | NodeJs | MongoDB | Open Source | D3 Js | JQuery **(Present)**

- Creating a data-visualization solution using various UI elements and saving its configuration in MongoDB.
- Implementing CRUD on UI elements belonging to different data-visualization solutions as per convenience.
- Mapping UI elements to various IOT devices, 3D models and geomaps.
- Invoking UI elements in response to certain events, alerts, user-defined conditions etc.

## ACADEMIC PROJECTS

**Distributed File Storage System** Java | Netty | Protobuf | Raft | Redis | MySQL

- Storing files on a distributed cluster infrastructure portraying high availability, fault tolerance and scalability.
- Implemented Raft consensus algorithm for leader election to provide client with a single point of entry to the cluster.
- Provided dynamic node addition and deletion to the cluster with the help of timers and heartbeats.
- Integrated with 5 more clusters (3 nodes each) in a ring with common API for compatible read, write behavior.
- Implemented work stealing, design patterns, write replication and multithreading.

**XYZ Scalable BurgerShop SaaS Web-App** React | GO | NodeJs | Cassandra | Riak | AWS | Microservices | Heroku

- Achieved XYZ Scalability i.e horizontal node duplication, Microservices as functional decomposition and data sharding.
- Ensured Horizontal scaling by using AWS load balancer along with auto-scaling group and Heroku.
- Created RESTful Microservices in GO having separation of concerns with less coupling and high cohesion.
- Applied data sharding across Cassandra (Multiple regions EC2 instance) and Riak clusters (Single Region EC2 instance).
- Achieved High Availability and Partition Tolerance using Cassandra with Ec2MultiRegionSnitch configuration

**Cognitive Nutrition Data Analysis for Diabetics** Android | Java | REST | Firebase | MongoDB | Machine Learning

- Developed an application to provide food recommendation for diabetics based on their blood glucose level.
- Used Yummly's REST API to get a list of food depending on current blood glucose level of the diabetics.
- Provided appropriate food recommendations by running our machine learning algorithm over food choices.
- Used Firebase for email authentication, deploying our algorithm over cloud and MongoDB Atlas for storing user data

**BookMyShow** Spring Boot | Hibernate | Angular | Java | CRUD REST API | MySql | Amazon RDS

- Developed a Web Application for online reservation of movie tickets.
- Created a REST API using Spring Boot for performing CRUD operations on MySql database.
- Used JPA for data persistence and MySQL connection pooling to improve the response time of system.
- Integration with Amazon RDS to easily set up, operate and scale MySql over the cloud.

**ZombieSlayers VR Game** Unity | VR | C# | Google Cardboard | Android | HTC Vive

- Developed a first-person shooter survival game portraying zombie apocalypse and earning points by killing zombies.