

Viraj Nilakh

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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- May 18

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

- 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

- 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.