

PRATHAMESH TAJANE

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EDUCATION

Northeastern University, College of Computer & Information Science, Boston, USA Sept 2016 - Dec 2018
Master of Science in Computer Science
Related Courses: Algorithms, Web Development, Information Retrieval, Large Scale Data Processing, Database Management System, Managing Software Development

University of Mumbai, Mumbai, India May 2014
Bachelor of Engineering in Information Technology First Class with Distinction
Relevant Courses: Object Oriented Analysis & Design, Data Structures and Algorithms, Database Technologies

TECHNICAL KNOWLEDGE

Languages: Java, Python, JavaScript(basic), Unix Shell Scripting, Racket
Web Technologies: HTML, CSS3, jQuery, AJAX, Bootstrap3, D3.js, NGINX, Docker, Docker Swarm, ExpressJS, NodeJS
Frameworks: AngularJS 1.x, Spring, Spring-Boot, Django, React, Redux, RESTful Webservices, Hadoop 2.9.1, Spark
Databases: MongoDB, SQLite 3, MySQL, Oracle, Firebase
Cloud Technologies: AWS Elastic MapReduce, AWS S3, AWS EC2, AWS RDS, Heroku, MQTT
IDE & Tools: Jenkins, Travis CI, IntelliJ IDEA, Eclipse, WebStorm, PyCharm, GitHub, RaspberryPi, Arduino, ESP8266

WORK EXPERIENCE

Northeastern University, Boston, USA Jan 2018 - Dec 2018
Research Assistant – IoT Open Innovation Lab
IoT Network integration platform (SpringBoot, Amazon Lambda Services, AWS RDS, Docker, Jenkins, SigFox, LoRa, MQTT)

- Designed an architecture for an integration platform of **SigFox**, **LoRa** and **MQTT** lightweight protocols to build the first dedicated IoT network infrastructure of Northeastern University (Boston Campus)
- Implemented a **Spring Boot** based micro service and converted it into **Docker** container to deploy it on **AWS EC2** instance
- Integrated **Amazon Alexa Skills** with this platform along with automatic load balancer with **NGINX**

Philips Lighting Research North Americas, Cambridge, USA Sept 2017 - Jan 2018
Research Software Developer Co-op Intern
Automated Commissioning of Luminaires (Django, SpringBoot, JavaScript, MQTT)

- Coordinated with Scientist and Research member of Philips Research innovation team to design and implement Commissioning of luminaires IoT(Internet Of Things) research project using JavaScript and **Django** framework to completely automate luminaires commissioning process with **92.3% accuracy**
- Optimized efficiency of message delivery **by 58.6%** in unreliable network by implementing publish-subscribe-based lightweight **MQTT** messaging protocol

National Stock Exchange of India InfoTech Services Ltd, Mumbai, India July 2014 - Aug 2016
Systems Analyst
Centralized knowledge repository of National Stock Exchange of India (Java, JavaScript, MediaWiki)

- Conceptualized and created an **Spring Boot** based knowledge sharing platform to store all trading data required for training and Interdepartmental knowledge transfer thereby broadening interdepartmental knowledge transfer rate of an organization by **32.5%**

PROJECTS

Vehicle fleet monitoring system (Spring Boot, Docker, Docker Swarm, NGINX, AWS EC2, AWS RDS, Jenkins) Jan 2019 - Feb 2019

- Designed and developed **Spring Boot MVC** micro service to model vehicle sensor ticker data from vehicle sensors
- Deployed this application on **AWS VPC** as **Docker** service and added scalability with **Docker Swarm** orchestration framework
- Configured **Portainer** container orchestration monitoring service for easy monitoring and to add dynamic scaling of container nodes over multiple subnets of AWS EC2 cluster with alert management using **AWS SES** service

Remote monitoring and control of battery farms using IoT technologies (Django, MQTT, Raspberry Pi) Sept 2017 - Oct 2017

- Designed and implemented architecture to remotely manage and monitor battery farms using **Raspberry Pi 3**, **ESP8266 microcontroller** and **MQTT** protocol, thereby reducing the cost of remote monitoring and control by 38%
- Integrated Amazon's Alexa service with the project by using **Amazon Lambda services** and **Alexa Cloud services**

Web Development (HTML, CSS, JavaScript, Bootstrap, AngularJS, NodeJS, MongoDB, ExpressJS) Jan 2017 - Feb 2017

- Speaking Tree Website** - Built a Single Page responsive website maker application using **MEAN Stack**