

# SACHIN RAJA

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## EDUCATION:

Illinois Institute of Technology - Masters in ECE ; Major: Computer Engineering

August 2018 - May 2020

Visvesvaraya Technological University - BE in Electrical and Electronics Engineering

August 2012 - July 2016

## TECHNICAL SKILLS:

<b>Core Programming Languages:</b>	Python, C#, C/C++, Java.
<b>Backend Technologies:</b>	Spring Boot, NodeJS, .NET framework 4.0, .NET Core, Flask, Apache Spark.
<b>Frontend Technologies:</b>	JavaScript: ReactJS, Angular JS, D3.js, HTML, CSS (CSS Grid, Flexbox), Bootstrap.
<b>Database Technologies:</b>	MySQL, PostgreSQL, MongoDB (NoSQL), SQLite3.
<b>Build/Deployment Technologies:</b>	Gradle, Azure, AWS, Heroku, Docker Containerization.
<b>Protocols:</b>	TCP/IP, MQTT, HTTP, FTP, VoIP, DNS, XBee, SSL.
<b>Tools Used:</b>	Visual Studio, GIT, JIRA, TFS, VS Code, IntelliJ, Crystal Reports, Log4j, Oracle VirtualBox, Jenkins.
<b>Operating Systems:</b>	Windows 10/8/7, UNIX/Linux OS and CLI, Raspbian.
<b>Area of Interest:</b>	Software Engineering, Data Structures and Algorithms, IoT Engineer.

## WORK EXPERIENCE:

### MetriTrack Inc.: Engineering Intern

August-2019 to present

- Developing and supporting a website using **HTML5, CSS, JavaScript, XML**. Writing software/hardware unit test cases, running smoke tests for WPF application used for the BVN system. Agile practices were used for the releases and client issues were addressed immediately. Image processing on DICOM images and Research on IEC Standards.
- Implementing firmware used for hardware testing, drafting hardware test protocols, procedures and conducting hardware tests programmed in **C/C++** and data analysis on sensor data, Clinical Data using SQL and Excel.

### Cognizant Technology Solutions: Software Engineer

June-2016 to July-2018

- Developed a License tracking application that consists all the critical license data of the client created on **.NET platform using C#, MS SQL Server** with relational databases achieving authentication and authorization to the web application. Fixed performance issues of crystal reports and improved the efficiency of generating reports by 15%.
- Administered multiple projects in **ASP.NET, C#, C/C++, Python, Angular JS** and enhanced the UI experience using JavaScript, CSS3 (Flexbox, CSS Grid). Provided L3 and L4 Support for the web application.
- Analyzed business requirements and planning of deployments in different environments (QA, UAT, Prod). Analysis and generation of custom complex quarterly reports as per the client's requirement.

## PROJECTS:

### IoT Simulator & Smart Hub:

- Building a scalable and responsive web application for an IoT Smart Hub for all commercial IoT devices irrespective of the make using **Python, Java, JavaScript using React, CSS, HTML** on the **spring boot** application framework.
- Developed RESTful API's using the publisher-subscriber messaging pattern and the MQTT Broker we update states thorough out the application in real time. Practiced Test-Driven Development of features through Junit test classes and log4j for application logs. Using MongoDB as the database.

### IoT Based Fall Detection System:

- Developed website to analyse the patient's vital data. On detection of a fall the physician will receive an alert along with the location of the patient.
- Used a **GPS, gyroscope** and **accelerometer** sensors for this implementation.
- Used **XBee** for communication and raspberry pi was used as a server.
- Used **Python and Flask** framework for creating the web application, **HTML, CSS3, JavaScript, Bootstrap** was used for the frontend and **SQLite3** as the backend database.

### SmartBrain App: Face Detector:

- Developed an application to detect faces in an image using the clarifai API. The app was created using **React JS**, Tachyons CSS toolkit. Used **NodeJS** for functional decisions and **POSTgreSQL** for data storage.
- Application was deployed to **Heroku** server to demonstrate functionality.

### Harcourt Online Tracking System:

- Developed and maintained a website to manage the vendors licenses and asset data. Implemented **crystal reports, excel sheets, Microsoft reporting tools** to generate reports from the applications.
- Used **C#** on **.NET framework 4.0** for creating the website, **HTML, CSS3, JavaScript, ASP.NET** was used for the frontend and **MySQL** as the backend database through **SQL Server management studio**.