**Karan Singh Negi**

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**Experience Summary:**

* 3+ years of experience in object-oriented programming,
* Efficient coding and working capability in C language.
* Have good knowledge in Front-End technologies I.e. HTML5, CSS3, Javascript, Mongodb, React and Nodejs..
* Strong understanding in XML and JSON parsing.
* Good knowledge in JIRA, JENKINS, GIT and POSTMAN.
* Have a very good communication and team management skills with the ability to learn new concepts and adapt to new environments.
* Hava good functional knowledge of Data structures and OOP Concepts.

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| **Areas** | **Technology** |
| Operating system | Linux, Windows. |
| Languages | C, HTML5, CSS3, JavaScript, Shell Scripting And Sql. |
| Framework And Libraries | React, Express, Lightning |
| Database | Mongodb, MySql And Firebase. |
| Middleware | Nexus, RDK |
| Tools | Git, SVN |
| Device | STB |

**Education**

* B.E. (Computer Science & Engineering), Chandigarh University, Gharuan.
* Higher Secondary (CBSE Board), GMSSS – 19, Chandigarh, Year of Passing: 2013.
* Senior Secondary (CBSE Board), Saint Soldier International School, Sector-26, Chandigarh, Year of Passing: 2011.

**Work Experience**

* Working as a Product Engineer in **Cognizant Technology Solutions,** Noida from August 2018 to till date.
* Underwent Six Month training in Cognizant Academy in Bangalore from Feb ,18 to August, 2k18.

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| Project | RDK |
| Client | Comcast |
| Duration | 8 Months |
| Team Size | 4 |
| Environment | Yocto , RDK , Linux |

**Project Description:**

Reference Design Kit, commonly known as RDK is a pre-integrated, open-source software distribution that accelerates the deployment of next-gen video and broadband services. It provides a common framework for powering customer-premises equipment (CPE) such as set-top boxes, modem/routers and other devices from communications service providers.

It helps service providers to standardize certain elements of these devices, enabling them to quickly launch their own new services or customize applications and user experiences. The RDK speeds time to market while enabling flexibility and competitive differentiation.

**Contribution:**

As a Developer, I was responsible for:

* RDK Yocto Integration which includes recipe creation and making it a part of Rootfs.
* Fixing defects of different modules present in the RDK.
* Enabling RDK-Logger components, so that logging functionality can be enabled for the new component.
* Debugging the issue related to RDM (Run Time Download Manager), which includes verifying the exact packages being downloaded at runtime during box boot up.
* Setting up the Xconf url from where the RDM packages should download.
* WebPa server enabling for the RDK-B devices.

**WebPa** : WebPa is a secure web protocol messaging system for bi-directional communication between cloud server and RDK devices.

I was responsible for:

* Installing Webpa client on the rdk devices that helps us to establish a connection with WebPa service on a device boot-up.
* Debugging the issue/errors related to failed connection with the Webpa server.
* Testing the connection using Postman i.e. send the API request to the Webpa server and check the results.
* Debugging client log files such as connection details, service initialization, which protocols are enabled/disabled.
* Checking downstream and upstream request.
* Using TR181 parameters to SET and GET the device various information using curl commands.
* Device Management and Remote Management with WebPa (QAM Clients).

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| Project | Screen & Clean (SNC) |
| Client | Tier1 OEM |
| Duration | 3 Months |
| Team Size | 3 |
| Environment | C/C++, Linux, Brodacom/Intel/ST/Sigma SoC |

**Project Description:**

Screen & Clean application provides diagnostic support for a set-top box (STB) product based upon the manufacturing test capability developed for the platform. These fundamental diagnostics allow validation of the hardware and hardware abstraction software of a STB product when fielded with minimal external test fixtures. Screen & Clean is used to test STB that have been returned from the field for hardware component failures and also to remove any user-related data and content.

**Contribution:**

As a Developer, I am responsible for

* Develop the MV, system list,Erase,HDD park commands and verified.
* Support verification of multiple STB (upto 16) simultaneously.
* Customize kernel code and device drivers for Broadcom set-top boxes.
* Develop the software modules to verify the STB’s hard disk and its smart capabilities.
* Develop the software modules to verify boot flash and application flash present on the STB using linux flash driver.
* Develop the software modules to verify tuning capabilities of the STB.
* Resolve issues reported from the field.

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| Project | Calculator and Dice Game |
| Duration | 1 Month |
| Language | JavaScript |

**Project Description**:

The calculator does all the normal operations like addition,subtraction,multiplication and division.

**Contribution** :

* Embedded the CSS3 code to make it look prettier.
* Implemented the JS code for performing all the necessary operations.

**Project Description:**

A dice game which is played among two players. THe player who crosses the mark 40 first wins the game.

**Contribution**:

* Enable the events as per dice rotations.
* Implemented DRY and Hold functions used.
* CSS3 and HTML5 embedded with js code.
* Finishing touch given to the state variables.