# Manpreet Dhanjal

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### **Education**

Degree	Institute	Year	Score
B.Tech	NIT Hamirpur, Himachal Pradesh	2010-14	8.41/10
Class 12	DAV Sr Sec Public School, Lakkar Bazar, Shimla	2010	93.8%
Class 10	DAV Sr Sec Public School, Lakkar Bazar, Shimla	2008	94.8%

#### **IndustrialExperience**

# Software Engineer (June 2014 – present): Verizon Data Services India

Worked to develop and enhance applications namely Consumer Pricing Interface(CPI) and Network Management System(NMS) developed in Java and J2EE utilizing Javascript, Jquery, CSS and HTML at front end. CPI is a portal which allows professionals from Revenue Assurance team to create plans and offers for customers which can be displayed in the pricing catalog. It employs DB2 and Oracle at back end and iBatis as data mapping framework.

NMS is an application that continuously monitors the devices in FTTP and VOIP networks and Data centers under Verizon and generates alarms if any issue occurs and displays the information on a web portal for the technical team.

# Intern (May 2013 – June 2013): Indian Institute of Remote Sensing (IIRS) unit of Indian Space Research Organization (ISRO), Department of Space, Government of India

Image Registration: Developed a semi-automatic software which could be used to analyze images and data obtained through satellites taken at different points of time or from different angles. The software implemented image enhancement techniques for pre-processing and feature based rigid transformations to register images.

Face detection: Developed a software to detect faces in images using feature based approach. The detection is performed by a cascade of neural networks which are trained using different sets of positive and negative images.

# **Projects**

**Hand Gesture Recognition:** This is an implementation of pattern recognition where hand gestures represent certain commands. These gestures are captured using web camera connected to a laptop and neural network and gesture recognition algorithms are used to recognize the gestures and perform functions accordingly.

**Text to speech converter:** This project breaks the input sentences into words and words into phenomes. Hidden Markov Model is used to determine the appropriate phenome sound and duration and using concatenative speech synthesis algorithm speech is produced.

**Voice Controlled robot:** Developed a robot using microcontroller 8051 interfaced with a laptop which had the ability to understand and respond to certain motion commands received through microphone connected to laptop. This project implemented digital signal processing to generate voice features and neural network for training and feature matching.

### **Technical Skills**

Languages: Java, J2EE,C, C++, HTML, CSS, JavaScript, JQuery, Assembly Language, Embedded C,

MATLAB, SQL, Python

Software: SonarQube, Fortify, JIRA, Jenkins

Database: Oracle, DB2, Cassandra

## **Achievements**

- Received spotlight recognition award for work done in JiTR (Just in Time Rating) project of Pricing application in Verizon.
- Stood first in ARM Design Challenge to design a game using ARM microcontroller.
- Ranked 14<sup>th</sup> among 86 students of Electronics & Communication Engineering, NIT Hamirpur (2010-2014) branch.
- Received Certificate of Merit for being among top 0.1% students in India by securing 100% marks in Mathematics and 99% marks in Social Studies in AISSE-08.
- Completed vocational training at Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun.
- Completed training on embedded systems and microcontroller 8051 at Advance Technology, Chandigarh.
- Joint Secretary for Hillfair-2013 (Cultural fest) of NIT Hamirpur.
- Vice-President for ISTE students' chapter NIT Hamirpur for 2013-2014.
- Design head of Srijan-2014 (college magazine) of NIT Hamirpur.
- Member of college volleyball team and participated in inter college volleyball tournament held at MNIT Jaipur.

# Hobbies

Playing volleyball and badminton, sketching, painting, listening to music, visiting historical places.