**B VRUSHABH**

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**SUMMARY:**

Pursuing Electrical Engineering at National Institute of Technology-Karnataka (NITK) and seeking internship opportunities in the field of Digital Design and Signal Processing for 3-6 months in 2019. My emphasis is on Digital Signal Processing, Digital Design and Analog Electronics.I aspire to be a part of an organization which helps me improve my skills and further contribute to the organization.

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| **EDUCATION:** | | |  |
| **Bachelor of Technology in Electrical and Electronics** | | | **CGPA: 8.7/10.00** |
| National Institute of Technology-Karnataka, Surathkal | | | Expected Graduation:2020 |
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| **RELEVANT COURSEWORK:** |  |  | | |
| Digital Electronics | Signals and Systems | Analog Electronics | | |
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**TECHNICAL SKILLS:**

* **Programming Languages**: C, Matlab,Octave,Praat,Python,Scilab
* **Design Tools**: Simulink, Arduino

**WORK EXPERIENCE:**

**Bharat Electronics Limited (BEL),** Bangalore **Dec 2017**

*Engineering Intern*

* Worked on FPGAs and Basic Network Architecture with emphasis on working with Encryption and Key Fill Devices.

**Indian Institute of Science (IISc),** Bangalore **May 2018-Present**

*Research Intern*

* Working on Speech Enhancement using Savitzky Golay Filter and Praat Plugin Development for denoising algorithms.

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| **PROJECT WORK:** |  |
| **Spectrograms and Classifications:** | **May 2018** |

* Worked on the plotting of Spectrograms, classification and optimized Fourier Transform Algorithm.
* Processed Speech was recovered using the ISTFT.

**Implementation of Savitzky Golay Filter:** **May 2018**

* Savitzky Golay Filter is implemented for smoothening of noisy ECG signals derived from Physio Bank Database.
* The filtering action can be extended over Speech Signals and Images with considerable noise.
* Variations of MSE (Mean Square Error) for different SNR of noise, Order and Window Length of the filter are plotted and trends are observed.

**Optimization of Savitzky Golay Filter:** **May 2018**

* Implemented SG filter is optimized by choosing appropriate Window Length and Order of Filter based on Steins Unbiased Risk Estimator (SURE) approach.

**Cosine Modulated Perfect Reconstruction Filter Bank:** **May 2018**

* Implemented a Cosine Modulated Perfect Reconstruction Filterbank.

**Speech Denoising using PROSE: May 2018**

* Praat Plugin for ‘PROSE: Perceptual Risk Optimization for Speech Enhancement ‘is being developed.

**Encryption devices: Dec 2017**

* The algo and Key developed for the key fill devices was tested on the child fill guns. Through Encryptor data was transmitted from one point to another and various parameters were realised. Different physical tests like hot test, cold test were performed on the devices to test their adaptability and strength. It basically dealt with analysis and construction of Encryptor and Child Fill Guns (CFG).