

# Deep Patel

## Curriculum Vitae

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### Education

- August, 2018–Present **M.Tech(Res)**, *Indian Institute of Science (IISc)*, Bangalore, *CGPA: 7.7/10*.  
*Department of Electrical Engineering*  
Thesis' Topic: I am studying and designing algorithms for robust supervised learning in the presence of label noise  
Advisor: Prof. P.S. Sastry
- July, 2012–July, 2016 **B.Tech in Electrical Engineering**, *PDPU*, Gandhinagar, *CGPA: 8.29/10*.

### Work Experience

- September, 2017–July, 2018 **Project Assistant**, *EE Department, IISc, Bangalore*.  
*Advisor: Dr. Prasanta Kumar Ghosh*  
*Funding Agencies: DST, India & Pratiksha Trust*
- Design and creation of a dataset comprising of speech samples from patients with ALS and Parkinson's Disease
  - Automatic speech based onset and severity prediction of ALS and Parkinson's Disease
  - This work has led to two publications, one in **ICASSP 2018** and the second in **Interspeech 2019**
- August, 2016–September, 2017 **Graduate Engineer Trainee**, *Reliance Industries Ltd. (RIL)*, Jamnagar, Gujarat.
- Observation of electrical commissioning and maintenance activities at a Low Density Polyethylene Manufacturing (LDPE) Plant, RIL J3 Project

### Teaching Experience

- January, 2020–June, 2020 **Teaching Assistant**, *EE Department, IISc, Bangalore*.  
*Course: Pattern Recognition and Neural Networks (PRNN)*
- September, 2020– **Teaching Assistant**, *EE Department, IISc, Bangalore*.  
*Course: Stochastic Models and Applications*

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## Projects

- March, 2019–April, 2019 **Sparse Signal Estimation by Maximally Sparse Convex Optimization.**  
Course: Compressive Sensing & Sparse Signal Processing .
- For the problem of denoising, a convex optimization problem was solved which induces strong sparsity (stronger than  $l_1$ -norm) with the help of proposed parametric, non-convex penalty functions, and performance comparison was done with classical algorithms such as *Matching Pursuit*, *Basis Pursuit*, and *Hard Thresholding* methods.

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## Extracurricular Activities

- June, 2019–Present **Team Member, NoteBook Drive (NBD), IISc, Bangalore.**
- Helped organize annual events such as *Children's Day Celebration*, *Note Book Distribution*, and *Scholarship Distribution* which are carried out across 25 government schools in and around Bangalore (~ 4000 students).
  - Helped organize a weekly programme, *Science Mentorship*, wherein government school kids get to study science and maths via interactive experiments and inculcate scientific temperament
- June, 2020–Present **Team Member, EMPATHS, IISc, Bangalore.**
- Organizing events related to mental health awareness and sensitization for the campus community

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## Relevant Courses

- Stochastic Modelling & Applications
- Linear & Non-Linear Optimization
- Compressive Sensing & Sparse Signal Processing
- Analysis-I
- Machine Learning
- Convex Optimization

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## Computer Skills

Languages Python

Software & Tools  $\LaTeX$ , MATLAB, Tensorflow, PyTorch

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## Publications

- ICASSP 2018 Aravind Illa, et al., '*Comparison of speech tasks for automatic classification of patients with amyotrophic lateral sclerosis and healthy subjects*' [[link](#)]
- Interspeech 2019 Suhas B. N. et al., '*Comparison of Speech Tasks and Recording Devices for Voice Based Automatic Classification of Healthy Subjects and Patients with Amyotrophic Lateral Sclerosis*' [[link](#)]

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## Languages

- English
- Gujarati
- Hindi
- Kannada (Ongoing effort)

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## References

- IISc, **Dr. P.S. Sastry.**  
Bangalore Professor,  
Department of Electrical Engineering  
email: [sastry@iisc.ac.in](mailto:sastry@iisc.ac.in); website: <http://www.ee.iisc.ac.in/faculty/sastry/index.php>
- IISc, **Dr. Prasanta Kumar Ghosh.**  
Bangalore Associate Professor,  
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