Deep Patel

Curriculum Vitae

✆ +91 7874393934
✉ deeppatel@iisc.ac.in, dbp.patel.1994@gmail.com
⌂ dbp1994.github.io
🛙 https://in.linkedin.com/in/deep-patel-7032b3a1
 dbp1994
Skype - live:dbp.patel.1994

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

September, 2020–Present
Teaching Assistant, *EE Department*, IISc, Bangalore.
Course: Stochastic Models and Applications

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

Projects

March, 2019–April, 2019
Sparse Signal Estimation by Maximally Sparse Convex Optimization.
<u>Course</u>: 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.

Extracurricular Activities

June, 2020–Present
Team Member, *EMPATHS*, IISc, Bangalore.
- Organizing events related to mental health awareness and sensitization for the campus community

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 ($\sim$ 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

Relevant Courses

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

Computer Skills

Languages — Python

Software & Tools — LaTeX, MATLAB, Tensorflow, PyTorch

Publications

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]

ICASSP 2018
Aravind Illa, et al., '*Comparison of speech tasks for automatic classification of patients with amyotrophic lateral sclerosis and healthy subjects*' [link]

Languages

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

References

IISc, **Dr. P.S. Sastry**.
Bangalore   Professor,
Department of Electrical Engineering
email: sastry@iisc.ac.in; website: http://www.ee.iisc.ac.in/faculty/sastry/index.php

IISc, **Dr. Prasanta Kumar Ghosh**.
Bangalore   Associate Professor,
Department of Electrical Engineering
email: prasantg@iisc.ac.in; website: http://www.ee.iisc.ac.in/people/faculty/prasantg/index.html