Sanjeel Parekh

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Education

Jan 2016–19 **PhD in Computer Science**, Technicolor R&D and Telecom Paris, France.
Thesis: Learning representations for robust audio-visual scene analysis
Advisors: Prof. Slim Essid, Prof. Gaël Richard (Telecom Paris)
Dr. Alexey Ozerov, Dr. Ngoc Duong, Dr. Patrick Pérez (then at Technicolor)
Reviewers: Dr. Josef Sivic (INRIA / ENS, France), Prof. Tuomas Virtanen (TUT, Finland)
- Proposed novel approaches that fuse audio and visual modalities to robustly perform multiple scene understanding tasks such as event classification, audio source separation/detection, visual object localization. Manuscript at https://pastel.archives-ouvertes.fr/tel-02115465/document

2014–15 **Master in Sound and Music Computing**, Universitat Pompeu Fabra, Barcelona.
Thesis: Improving audio retrieval through content and metadata categorization
Advisors: Prof. Xavier Serra and Dr. Frederic Font, Music Technology Group
- We organize audio content and metadata information through morphological description and topic modeling respectively to improve audio retrieval in the context of `freesound.org`

2010–14 **Bachelor of Technology (hons.) in Electronics and Communication Eng.**, The LNM Institute of Information Technology, Jaipur, CGPA: 9.65/10, Class Position: **2/197**.
Thesis: Exploring speech representation schemes: A manifold learning approach
Advisors: Dr. Chng Eng Siong (NTU, Singapore) and Dr. Pratik Shah (IIIT-Vadodara)
- Investigated various manifold learning algorithms and sparse representation paradigm for feature extraction and classification of vowels

North Indian Classical Music, Vocal

2012 **Sangeet Bhushan**, Pracheen Kala Kendra, Chandigarh, India.

2011 **Junior Diploma**, Prayaag Sangeet Samiti, Allahabad, India.

Honors and Achievements

2019 Awarded ISMIR 2019 community grant for delivering tutorial on Audiovisual Music Processing with Prof. Zhiyao Duan, Prof. Slim Essid and Bochen Li

2015 Awarded CIFRE Fellowship to conduct doctoral research within an industry-university collaboration in France

2012 Received letter of commendation for highest cumulative performance index, LNMIIT

2012 Interviewed by All India Radio in the program 'Shining Star' as a young classical vocalist (Broadcasted on 26/12/2012)

Work Experience

Feb 2020–Present **Postdoctoral Researcher in Machine Learning**, Telecom Paris, France.
Chair on Data Science & Artificial Intelligence
Advisor: Prof. Florence d'Alché-Buc
- Recently joined the chair to work in areas of interest such as active learning and deep kernel learning.

Feb 2019–20 **Research Engineer**, The A-sense and Telecom Paris, France.
Audio Scene Analysis
Team: Prof. Slim Essid, Dr. Raphael Blouet, Dr. Francois Rigaud
- Worked on real-time audio event detection for the A-sense startup (Details not provided due to non-disclosure agreement)

October 2015 **Algorithm Engineering Intern**, Douban Inc., Beijing.
Music Recommendation
Advisor: Dr. Jason Zhao, Director of Algorithm and Douban FM Product Team
- Proposed and implemented an algorithm to improve Douban FM, company's music recommendation system (Details not provided due to non-disclosure agreement)

December 2013 **Carnegie Mellon University IPTSE Winter School**, Multimedia Proc. & Data Mining.
Content-Based Video Indexing and Retrieval Using Corr-LDA
Advisors: Dr. Bhiksha Raj and Dr. Rita Singh (Carnegie Mellon University, USA)
- Designed a novel content-based video indexing and retrieval system using correspondence latent dirichlet allocation (Corr-LDA) framework (`http://arxiv.org/pdf/1602.08581v1.pdf`)

May–August 2013 **EEE Research Attachment Programme**, Nanyang Technological University, Singapore.
Polymer Based Thin Film Organic Photovoltaic Solar Cells
Advisor: Dr. Tang Xiaohong, School of Electrical and Electronic Engineering
- Fabricated P3HT/PCBM organic solar cells
- Acquired experimental skills in spin coating, thickness measurement and solar cell characterization
- Simulation of device models for bulk heterojunction organic solar cell

May–July 2012 **Research Intern**, Microsoft Research Lab, India.
Quantifying People's Affinity Towards Pentatonic Scales
Advisors: Dr. Ranjita Bhagwan and Dr. Monojit Choudhury
- Designed a web interface (survey) consisting of several experiments to gather data for understanding people's affinity and choice hierarchy for a chosen set of existing and theoretical pentatonic scales

Patents and Publications

Please visit my google scholar page (link)

Skills

Technical Programming/Frameworks: Python, TensorFlow, Keras, MATLAB, C, Apache Spark

Course work in audio/image signal processing, machine learning, optimization, music perception. Attended machine learning (MLSS 2017) and computer vision (ICVSS 2016) summer schools.

Music Vocal: North Indian Classical Music | Instruments: Harmonium, Tabla

Language Full Professional Proficiency: English, Hindi | Elementary: French

Professional and Extracurricular Activities

Reviewing IEEE Transactions on Audio, Speech and Language Processing, EURASIP Journal on Audio, Speech, and Music Processing, 2017, 2018, ISMIR 2020

Music Joined music band at Technicolor as a vocalist, 2017–2018

Selected to judge auditions for music performances at Rishi Valley School, 2009

Performed and devised several vocal stage programs / Lead group member for vocals, 2006–2010

Theatre Participated in several English and Hindi plays

Attended a 60-day theatre workshop by National School of Drama graduates

Selected Talks

May 2020 Audiovisual representation learning with applications to music performances
Invited expert talk at ATAL-AI Faculty Development Program, IIIT Vadodara

Jan 2020 Learning representations for robust AV scene analysis
ENS, Lyon, France - Successful postdoc application in Dr. Remi Gribonval's group

Nov 2019 Tutorial on Audio-visual Music Processing (with Prof. Z. Duan, Prof. S. Essid and B. Li)
ISMIR 2019, TU Delft, Netherlands

Sept 2018 Weakly supervised representation learning for AV events
Deep Learning: From Theory to Applications, Rennes