Sanjeel Parekh

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Education

2016–19   **PhD in Computer Science**, Technicolor 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: Prof. Tuomas Virtanen (TUT, Finland), Dr. Josef Sivic (INRIA / ENS, France)
- Proposed novel approaches that fuse audio and visual modalities to robustly perform scene understanding tasks such as event classification, audio source separation/detection, visual object localization. Manuscript at https://pastel.archives-ouvertes.fr/tel-02115465

2014–15   **Masters 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
- Improved audio retrieval in the context of freesound.org through morphological description of audio content and topic modeling of metadata (https://zenodo.org/record/3733039)

2010–14   **Bachelor of Technology (hons.) in Electronics and Communication Eng.**, The LNM Institute of Information Technology, Jaipur, 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 (Diploma)**, Pracheen Kala Kendra, Chandigarh, India.

Honors and Achievements

2019   Awarded ISMIR 2019 community grant for co-teaching 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 (Project Leader)**, Telecom Paris, France.
Deep active learning, Kernel methods and Interpretability, Chair on Data Science & Artificial Intelligence
Advisor: Prof. Florence d'Alché-Buc
- Working on active learning, interpretability and infinite task learning applications such as style transfer
- Managing several chair activities: for e.g. creating content for research dissemination, organizing weekly team meetings (agenda and presentations)

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
- Designed compact deep learning models and data engineering modules for real-world audio event detection for the A-sense startup, a company incubated at Telecom Paris, aiming to build AI-powered audio sensing machines (Details not provided due to non-disclosure agreement)

Jan 2016–19   **Doctoral Researcher**, Technicolor, France.
Industrial PhD, CIFRE
- PhD research in conjunction with Telecom Paris
- Participated in other collaborative projects with researchers from the company

Oct 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)
Dec 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 (CMU, 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–Aug 2013	**EEE Research Attachment Programme**, NTU, 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 & solar cell characterization
	○ Simulated device models for bulk heterojunction organic solar cell
May–Jul 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

Publications and Patents

Please visit my google scholar page (link) or see the Appendix (Page 3)

Skills

Technical	Programming/Frameworks: Python, PyTorch, TensorFlow, Keras, MATLAB, C
	Course work: signal processing, machine learning, optimization, music perception
	Machine learning (MLSS 2017) & computer vision (ICVSS 2016) summer schools.
Music	Vocal: North Indian Classical Music | Instruments: Harmonium, Tabla
Language	Full Professional Proficiency: English, Hindi | Elementary: French (A2 level)

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, 2021
Music	Joined music band at Technicolor as a vocalist, 2017–2018
	Selected to judge auditions for music performances at Rishi Valley School, 2009
	Performed in several vocal stage programs / Lead school singing assemblies, 2006–10
Theatre	Participated in several English and Hindi plays
	Attended a 60-day theatre workshop by National School of Drama graduates

Selected Technical Talks

May 2020, Dec 2021	Audiovisual representation learning with applications to music performances Invited expert talk at ATAL Faculty Development Programs on AI (2020) and deep learning (2021), IIIT Vadodara, India
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