Ashis Pati

about

Ph.D., Music Tech
Georgia Tech

+1-(404)-819-5317
apati3@gatech.edu
ashispati.github.io
/in/ashispati
/ashispati

programming

python, C/C++, matlab

frameworks

pyTorch, tensorflow, JUCE, weka

interests

music informatics
comp. audio analysis
machine learning
deep learning
generative models
comp. creativity

teaching

instructor
deep learning for music
teaching assistant
comp. music analysis
digital signal proc.

service

reviewer
IEEE TALSP
ISMIR
Applied Sciences
Web Audio
prog. committee
AI Music Creativity
red judge
IBM Watson AI X-Prize

coursework

music
comp. music analysis
music perception
computer science
deep learning
pattern recognition
cognitive science
genetic algorithms
signal processing
audio software engg.
digital signal proc.
statistical signal proc.

Work Experience

2016-2020 **Georgia Tech** | *Graduate Research Assistant, Music Informatics Group* — Atlanta, USA
Developed tools & methods for **automatic music performance assessment**.

Jun-Dec'19 **Apple, Inc.** | *Ph.D. Intern, Advanced Computation Group* — Portland, USA
Designed and developed deep neural networks for **vocal detection** in polyphonic music.

May-Aug'18 **Sony CSL** | *Research Intern, Music Team* — Paris, France
Developed **deep learning**-based models for **music inpainting** on symbolic music data.

May-Aug'17 **Doppler Labs, Inc.** | *Audio Intern, Product Development* — San Jose, USA
Designed & developed a prototype **self-administered hearing test** for mobile devices.

May-Aug'16 **Doppler Labs, Inc.** | *DSP Research Intern, Audio Engineering Group* — San Francisco, USA
Developed algorithms & tools for automatic **audio event detection** in field recordings.

2011-2015 **ITC Limited** | *Assistant Project Manager* — Hyderabad, India
Managed large-scale **energy & sustainability** projects for the Paperboards Division.

Education

2015-2020 **Georgia Institute of Technology** | *CGPA: 4.0/4* — Georgia Tech
Ph.D., Music Technology, with minor in Artificial Intelligence & Deep Learning

2007-2011 **Indian Institute of Technology, Kanpur** | *CGPA: 8.3/10* — IIT Kanpur
B.Tech., Electrical Engineering, focus on Digital Signal & Image processing

Publications (selected)

Attribute-based Regularization of Latent Spaces for Variational Auto-Encoders — Journal
Neural Computing and Applications, 2020

dMelodies: A Music Dataset for Disentanglement Learning — Conference
21st International Society for Music Information Retrieval Conference (ISMIR). 2020

An Interdisciplinary Review of Music Performance Analysis — Journal
Transactions of the International Society for Music Information Retrieval 3.1, pp. 221–245, 2020

Score-informed Networks for Music Performance Assessment — Conference
21st International Society for Music Information Retrieval Conference (ISMIR). 2020

Learning to Traverse Latent Spaces for Musical Score Inpainting — Conference
20th International Society for Music Information Retrieval Conference (ISMIR). 2019

Latent Space Regularization for Explicit Control of Musical Attributes — Conference
ICML Workshop on Machine Learning for Music Discovery Workshop (ML4MD). 2019

Explicitly Conditioned Melody Generation: A Case Study with Interdependent RNNs — Conference
7th International Workshop on Musical Metacreation (MUME). 2019

A Model-Agnostic Web Interface for Interactive Music Composition by Inpainting — Demo
Neural Information Processing Systems (NeurIPS). 2018

Assessment of Student Music Performances Using Deep Neural Networks — Journal
Applied Sciences 8.4, p. 507, 2018

A Dataset and Method for Electric Guitar Solo Detection in Rock Music — Conference
AES International Conference on Semantic Audio. 2017

Awards

2020 **Best Reviewer Award** | awarded to top rated reviewers — 21st ISMIR
2011 **IIT Kanpur Excellence Award** | art & cultural activities — IIT Kanpur
2009 **Academic Excellence Award** | awarded to top 5% students in the batch — IIT Kanpur
2005 **KYPY Fellowship** | awarded for strong aptitude in science & research — Govt. of India
2005 **National Talent Search Scholarship** | awarded for high academic talent — NCERT