SRIKANTH CHERLA

PERSONAL INFORMATION

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WORK EXPERIENCE

Jan 16- **Machine Learning Researcher**

Jukedeck Ltd. (London)
Developing, improving and evaluating recurrent neural network architectures in Python for automatic generation of music given style and mood.
Reference: Patrick Stobbs · patrick@jukedeck.com

Oct 11-Jul 12 **Research Assistant**

Simon Fraser University (Vancouver)
Developed digital waveguide synthesis models in Matlab for wind instruments. This also involved collecting audio data from and measuring impulse responses of the said instruments.
Reference: Dr. Tamara Smyth · tamaras@ucsd.edu

Jan 11-Apr 11 **Intern**

PMC Technologies (Barcelona)
Carried out experiments with support vector, linear and ridge regression models using Weka on machine-state data for early fault detection in manufacturing machinery in the semi-conductor industry.
Reference: Dr. Hendrik Purwins · hpu@create.aau.dk

Jul 07-Jul 10 **Research Engineer**

Siemens Corporate Technology (Bangalore)
Worked on computer vision algorithms for Human Action Recognition using silhouette-based motion features and dynamic programming. This approach was extended to Auditory Scene Analysis with MFCC features. Also implemented video stitching and image segmentation (MSER) algorithms in C.
Reference: Dr. Amit Kale · amitmeister@gmail.com

EDUCATION

2012-2016 **Doctor of Philosophy**

City University (London)
Music Informatics · Department of Computer Science
Thesis: ***Connectionist Models for Classification and Sequence Learning***
Description: Key contributions of this work include a comparative evaluation of connectionist and n-gram melody models, a novel sequence labelling model and extensions to a class of models known as Boltzmann Machines.
Advisors: Dr. Artur Garcez · a.garcez@city.ac.uk
Dr. Tillman Weyde · t.e.weyde@city.ac.uk

2010-2011 **Master of Science**

Universitat Pompeu Fabra (Barcelona)
GPA: 9.24 · *Sound and Music Computing* · Music Technology Group
Thesis: ***Automatic Phrase Continuation in Guitar and Bass-Guitar Melodies***
Description: A system for note extraction using onset and pitch detection algorithms, followed by sequence learning using variable order Markov models to generate stylistically similar continuations of audio melodies.
Advisor: Dr. Hendrik Purwins · hpu@create.aau.dk

2003-2007	Bachelor of Technology

International Institute of Information Technology (Hyderabad)

GPA: 6.96 · *Computer Science & Engineering* · Centre for Visual IT
Final Project: ***Real-Time Camera Based Traffic Violation Detection System***
Description: A system to detect common traffic-rule violations (wrong-side driving, speeding, etc.) that occurred at a junction near the university entrance using computer vision algorithms and simple heuristics.
Advisor: Dr. C. V. Jawahar · jawahar@iiit.ac.in

KEY PUBLICATIONS

2018   G. Medeot, S. Cherla, K. Kosta, M. McVicar, S. Abdallah, M. Selvi, E. Newton-Rex and K. Webster, **"StructureNet: Inducing Structure in Generated Melodies"**, in *Proc. 19ᵗʰ International Society for Music Information Retrieval Conference,* (Paris, France).

2015   S. Cherla, S. Tran, A. d'Avila Garcez and T. Weyde, **"Discriminative Learning and Inference in the Recurrent Temporal RBM for Melody Modelling"**, in *Proc. International Joint Conference on Neural Networks,* (Killarney, Ireland).

2013   S. Cherla, T. Weyde, A. d'Avila Garcez and M. Pearce, **"A Distributed Model for Multiple-viewpoint Melodic Prediction"**, in *Proc. 14ᵗʰ International Society for Music Information Retrieval Conference,* pp. 15-20 (Curitiba, Brazil).

2008   S. Cherla, K. Kulkarni, A. Kale and V. Ramasubramanian, **"Towards Fast, View-Invariant Human Action Recognition"**, in *Proc. Computer Vision and Pattern Recognition Workshops (CVPRW)*, pp. 1-8 (Anchorage, USA).

Complete list: https://cherla.org/publications.html

TECHNICAL SKILLS

Operating Systems	Debian/Ubuntu Linux
Languages	PYTHON, MATLAB/GNU OCTAVE, BASH, LATEX, HTML, C

OTHER INFORMATION

Awards	2013 · Best Student Paper (Int'l Society for Music Information Retrieval Conf.)
	2013 · Best Poster Presentation (City Post-graduate Research Symposium)
	2007 · Recognition for promoting cultural activities at the IIIT - Hyderabad
Scholarships	2012-2015 · 100% Fee Waiver & PhD Studentship (City University London)
	2010-2011 · 75% Fee Waiver (Universitat Pompeu Fabra)
	2003-2007 · 25% Fee Waiver (Pratibha Scholarship, Govt. of Andhra Pradesh)
Teaching	SPRING 2016 · Neural Computing (City University London)
	FALL 2015 · Machine Learning (City University London
	SPRING 2015 · Computation and Reasoning (City University London)

Complete list: https://cherla.org/teaching.html

Research Interests	MACHINE LEARNING · NEURAL NETWORKS · SIGNAL PROCESSING · MUSIC INFORMATION RETRIEVAL · AI FOR CREATIVITY & EDUCATION

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