Rithesh Kumar

Artificial Intelligence Researcher at Descript

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Summary

I am a full-time AI researcher at Descript, working on Overdub. Recently I completed my MSc in Computer Science (specializing in Artificial Intelligence) at Mila lab in Université de Montréal supervised by Prof. Yoshua Bengio. My core research interests are speech synthesis and generative models for sequential data.

Experience

Artificial Intelligence Researcher, Descript, Montréal, Québec   Nov 2018—Current

Research Intern, Microsoft Research - Montréal, Québec   Feb 2018—Sep 2018

Research Intern, Lyrebird.ai, Montréal, Québec   May 2017—Feb 2018

Research Collaborator (remote)**, Mila** – Université de Montréal   Apr 2016—May 2017

Research Intern, Serre Lab, Brown University   Jun 2016—Aug 2016

Research Intern, Artifacia, Bangalore   Dec 2015—Jan 2016

Education

M.Sc, Computer Science (Artificial Intelligence)   Sep 2017—Aug 2019

Université de Montréal (Mila), Montréal, Québec

Research Supervisor: Prof. Yoshua Bengio

CGPA: 4.15 / 4.3

B.E, Computer Science and Engineering   Aug 2013—Apr 2017

Anna University, Chennai, Tamil Nadu

CGPA: 8.63 / 10.0 (**Rank 46** among 16,449 candidates)

Publications

MelGAN: Generative Adversarial Networks for Conditional Waveform Synthesis [paper] [blog]

Kundan Kumar*, Rithesh Kumar*, Thiubault de Boissiere, Lucas Gestin, Wei Zhen Teoh, Jose Sotelo, Alexandre de Brebisson, Yoshua Bengio, Aaron Courville

Published at NeurIPS 2019 Conference Track

Maximum Entropy Generators for Energy-Based Models [paper]

Rithesh Kumar, Sherjil Ozair, Anirudh Goyal, Aaron Courville, Yoshua Bengio

Masters Thesis

Harmonic Recomposition using Conditional Autoregressive Modeling [paper]

Kyle Kastner, Rithesh Kumar, Tim Coojimans, Aaron Courville

Published as Poster Presentation - The 2018 Joint Workshop on Machine Learning for Music

ObamaNet: Photo-realistic lip-sync from text [paper] [website]

Rithesh Kumar, Jose Sotelo, Kundan Kumar, Alexandre de Brébisson,Yoshua Bengio

Published as Oral Presentation - NIPS 2017 ML for Creativity and Design Workshop

SampleRNN: An Unconditional End-to-End Neural Audio Generation Model [paper]

Soroush Mehri, Kundan Kumar, Ishaan Gulrajani, Rithesh Kumar, Shubham Jain, Jose Sotelo, Aaron Courville,Yoshua Bengio

Published as Poster Presentation - ICLR 2017 Conference Track

Selected Projects

Reproducing Neural Discrete Representation Learning [github] [report]   Jan 2018—Apr 2018

Rithesh Kumar, Tristan Deleu, Evan Racah - Mila

Reproduced and analyzed Vector-Quantized Variational Autoencoders (VQ-VAEs)
(IFT 6135 - Representation Learning course final project)

Reproducing WYSIWYG: Visual Markup Decompiler [github]   Dec 2016—Jan 2017

Rithesh Kumar, Rithesh Rohan, U. Sivashanmugam - SSNCE

Developed a software tool to deconstruct image of math equations to its
corresponding LaTeX markup (Undergraduate final project)

Relevant Courses and Skills

Graduate

IFT 6135 - Representation Learning - Prof. Aaron Courville

COMP 767 - Reinforcement Learning - Prof. Doina Precup

IFT 6269 - Probabilistic Graphical Models - Prof. Simon Lacoste-Julien

IFT 6080 - Duckietown (Autonomous Vehicles) - Prof. Liam Paull

MOOCs

Data Science Specialization - Johns Hopkins University (Coursera)