RNN Convolutional Code Decoder

Calvin Higgins, Justin Watkins, Tuyetlinh Nguyen

University of Rhode Island

December 21, 2022

Overview

- Goal and Motivation
- Background
 - The Viterbi Decoder
- Tools
 - scikit-dsp-comm
- Our Model
 - RNN (?)
- Results
- 6 References

- Goal and Motivation
- BackgroundThe Viterbi Decoder
- Toolsscikit-dsp-comm
- Our Model
 RNN (?)
- 5 Results
- 6 References

Goal and Motivation

- Goal and Motivation
- Background
 - The Viterbi Decoder
- Tools
 - scikit-dsp-comm
- 4 Our Model
 - RNN (?)
- 6 Results
- References

The Viterbi Decoder

- Goal and Motivation
- BackgroundThe Viterbi Decoder
- Tools
 - scikit-dsp-comm
- Our ModelRNN (?)
- 6 Results
- 6 References

scikit-dsp-comm

- Goal and Motivation
- BackgroundThe Viterbi Decoder
- Toolsscikit-dsp-comm
- 4 Our Model
 - RNN (?)
- 6 Results
- 6 References

RNN (?)

- Goal and Motivation
- BackgroundThe Viterbi Decoder
- Toolsscikit-dsp-comm
- Our ModelRNN (?)
- 6 Results
- References

Results

- Goal and Motivation
- BackgroundThe Viterbi Decoder
- Toolsscikit-dsp-comm
- 4 Our Model • RNN (?)
- 5 Results
- 6 References

References



Jason Brownlee (2019)

A Gentle Introduction to Markov Chain Monte Carlo for Probability

Machine Learning Mastery https://machinelearningmastery.com/markov-chain-monte-carlo-for-probability/.



Marco Taboga (2021)

Markov Chain Monte Carlo (MCMC) Methods

StatLect - Lectures on Probability Theory and Mathematical Statistics https://www.statlect.com/fundamentals-of-statistics/Markov-Chain-Monte-Carlo.



Robert P. Dobrow (2016)

Markov Chain Monte Carlo

Introduction to Stochastic Processes With R, Chapter 5, 181 – 222.

Questions?