

Groups and Topics for Information Theory Seminars 2024-1

Last update: June 27th, 2024

Group #	Members	Topic	Presentation Date	Group #	Members	Topic	Presentation Date
1	Pedro Paulo Portella Teles	Cover & Thomas, Chapter 16: Information Theory and Portfolio Theory	Day 3: 2024/07/23 (Tuesday)	15	Lucas Perez Santos	Fisher information and its applications	Day 4: 2024/07/25 (Thursday)
2	Augusto Mafra	Information-Theoretic Modeling of Fault Injection Attacks on Hardware Systems		16	Gustavo de Oliveira Corrêa	Information theory in hydrology (probably about transfer entropy)	
4	Frederico Cancado	An introduction Quantum information theory, uses of entropy on combinatorics, kolmogorov complexity, a brief perspective on the entropies		17	Gabriel Lima Canguçu	To Compress or Not to Compress—Self-Supervised Learning and Information Theory: A Review ( <a href="https://www.mdpi.com/1099-4300/26/3/252">https://www.mdpi.com/1099-4300/26/3/252</a> )	
4	Diego Pereira	MacKay, Chapter 18: Crosswords and Codebreaking		18	Barbara Martins	MacKay, Chapter 14: Very Good Linear Codes Exist	
	Gabriel Fialho				Jean Godard		
	Luís Felipe Ramos				Leandro Freitas		
5	Mariano Fernandes	Cover & Thomas, Chapter 05: Gambling and Data Compression		19	Francisco Neves Tinoco Junior	MacKay, Chapter 28: Model Comparison and Occam's Razor	
	Matheus Irias				Gabriela Pereira Faria Paixão		
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6	Gabriela Moraes Miserani de Freitas	MacKay, Chapter 19: Why have sex? Information Acquisition and Evolution		20	Camila Silva Alves	Cover & Thomas, Chapter 04: Entropy Rates of a Stochastic Process	
	Isabella Vignoli Gonçalves				Rachel Freire Biezuner		
	Luísa Toledo				--		
7	Lucas Rios Bicalho	Aplicações de Information Theory em Realidade Virtual: o equilíbrio entre o conforto e a capacidade de um canal		21	Bruno Flister	Information-Theoretic Approaches to Linguistics	
	Isabel Elise Silva Duque				Marcela Polanczyk		
	Felipe Rodrigues		Lauro Teixeira				
8	Maria Luiza Leão Silva	MacKay, Chapter 10: The Noisy-Channel Coding Theorem	22	Heitor Henrique dos Santos	Information Theory & Quantitative Information Flow		
	Raissa Miranda Maciel			Mateus Krause			
	--			Murilo Ribeiro			
9	Raphaela Silva	MacKay, Chapter 12: Hash Codes: Codes for Efficient Information Retrieval	23	José Martins da Rosa Júnior	Uso da métrica NMI - Normalized Mutual Information para cálculo de entropia em comunidades		
	Samuel Brísio						
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10	Gabriel Teixeira Carvalho	Cover & Thomas, Chapter 14: Kolmogorov Complexity	24	Igor Wallace dos Santo Lemes	Entropy as a Topological Operad Derivation		
	Gabriel Lima Barros						
	Thiago Pádua de Carvalho						
11	Ana Luisa Mendes	MacKay, Chapter 16: Message Passing	25	Arthur Nader	Norm of Word Embedding Encodes Information Gain ( <a href="https://arxiv.org/pdf/2212.09663">https://arxiv.org/pdf/2212.09663</a> )		
	Maria Clara Ferreira						
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12	Gustavo Tavares Corrêa	MacKay, Chapter 41: Learning as Inference	26	Rita Borges de Lima	MacKay, Chapter 50: Digital Fountain Codes		
	Lucas de Oliveira Ferreira						
	Turi Andrade Vasconcelos						
13	Alan Prado	T.B.A.	27	Breno Augusto Mariano	Solomonoff Induction		
	Kaio Vieira						
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14	Leandro Diniz Silva	MacKay, Chapter 47: Sparse-Graph Codes: Low-Density Parity-Check Codes	28	André Luiz Moreira Dutra	Mackay chapter 11 - Error-Correcting codes and Real Channels. / Mackay chapter 17 - Communication over Constrained Noiseless Channels. / Information Theory applied to feature selection for machine learning models.		
	Luiz Eduardo Cordeiro Ribeiro			Gabriel Rocha Martins			
	Tiago Gonçalves Laranjo						
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