Institute	Group	Seminar	Project	Thesis	Category	Supervisor	Topic	More Info
CP	all		x	x	all	all	https://www.jku.at/en/institute-of-computational-perception/teaching/theses-and-projects/	
CP	MMS/HCAI	x	x	x	Graph Neural Networks	MS	Cognitive biases in LLMs (analyzing, formalizing, leveraging)	Fix personal meeting.
CP	MMS/HCAI	x	x	x	ML / Psychology	MS	Cognitive biases in search, retrieval, and recommender systems (analyzing, formalizing, leveraging)	Fix personal meeting.
CP	MMS/HCAI		x	x	LLMs / Psychology	MS (with Til Betsch / Erfurt Univ.)	Investigating mutual influence between user and LLM (w.r.t. emotion dynamics of prompts and respones	Fix personal meeting.
CP	MMS/HCAI		x	x	LLMs / Psychology	MS (with Til Betsch / Erfurt Univ.)	Investigating confirmation bias in LLMs (How does framing of prompt effect responses?)	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / LLMs / Psychology	MS	Exploring LLM prompting strategies for intent-aware music recommendation	Fix personal meeting.
CP	MMS/HCAI		x	x	ML / Psychology	MS	Studying emotions evoked by AI- vs. human-generated art/images	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / NLP / DS	MS (with Deezer)	Investigating LLMs for music recommendation (different prompting schemes, language/cultural biases, data augmentation)	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / NLP / DS	MS (with Deezer)	Investigating LLMs for profiling users through music listening/interactions (music preferences, consumption habits, etc.)	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / Data Science	MS	Investigate the influence of differential privacy on accuracy and beyond-accuracy aspects of state-of-the-art recommendation algorithms	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / Data Science	OL/MS	Investigate popularity miscalibration/bias in commercial music recommender systems	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys / Data Science	OL/MM/MS	Investigate popularity bias in content-based (music) IR or RecSys	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / Data Science	MS	Investigate carbon footprint of RecSys algorithms	Fix personal meeting.
CP	MMS/HCAI		x		RecSys / Data Science	GE	Diffusion-based user data generation for recommender systems	Fix personal meeting.
CP	MMS/HCAI	x	x		RecSys / Data Science	GE	Gradient-based debiasing for recommender systems	Fix personal meeting.
CP	MMS/HCAI		x	x	ML / RecSys	MS/YD/DP	Fair Recommenders with Graph-based Neural Networks	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / Data Science	MS/YD	Analyzing Fairness in Recommender Systems Driven by Generative AI and LLMs	Fix personal meeting.
CP	MMS/HCAI		x	x	ML / RecSys	MS/YD	Explainable Music Recommendations Using Large Language Models	Fix personal meeting.
CP	MMS/HCAI		x	x	ML / RecSys	MS/YD	Fine-Tuning Large Language Models for Personalized (Sequential) Music Recommendation with Cultural Awareness	Fix personal meeting.
CP	MMS/HCAI		x	x	ML / RecSys	MS/YD	Fine-Tuning Large Language Models for Personalized Healthcare Decision-Making	Fix personal meeting.
CP	MMS/HCAI	x	x	x	ML	MS	Extracting music listening intents/purposes from music-related and behavioral data	Fix personal meeting.
CP	MMS/HCAI	x	x	x	ML	MS/SN	Detecting "fake" images created by generative AI	Fix personal meeting.
CP	MMS/HCAI	x	x	x	ML	MS	Classification of LLM- vs. human-generated text	Fix personal meeting.
CP	MMS/HCAI		x	x	Data Science	MS	Analysis of gender and country bias in research papers	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys	DK/MS	LLM-based recommender systems	Fix personal meeting.
CP	MMS/HCAI	x	x	x	ML	Sh/MS	Concept Control in LLMs	Fix personal meeting.
CP	MMS/HCAI	x	x		ML	Sh/MS	Debiasing NLP models with augmentation	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys	MS	Psychology-informed recommender systems (cognition models, affect-aware, personality-aware systems)	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys	MS/GE	Diffusion models for recommender systems	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys	MS	Adversarial training for unlearning protected user characteristics in DNN-based RecSys	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys	MS	Autoencoders for recommender systems	Fix personal meeting.
CP	MMS/HCAI		x	x	RecSys / Data Science	OL/MS	Simulating the long-term impact of recommendation algorithms on recommendations	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys / ML	OL/MM/MS	In-processing (multi-objective) bias mitigation in Recommender Systems	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys / NLP	OL/GE/DK/MS	Conversational Recommender Systems (Design, Evaluation, Debiasing)	Fix personal meeting.
CP	MMS/HCAI	x	x	x	RecSys / Data Science	OL/MS	User studies on bias and fairness of recommender systems	Fix personal meeting.
CP	MMS/HCAI	x	x	x	NLP	DK/MS	Measuring and Mitigating Language-Specific Bias in Large Language Models	Fix personal meeting.
CP	MMS/HCAI	x	x	x	NLP	DK/MS	Bias in Generative LLMs	Fix personal meeting.
CP	MMS/HCAI	x	x	x	Multimedia	SN	Multimodal Learning System Robust to Missing Modalities & Generating missing modalities	Please contact Shah Nawaz <shah.nawaz@jku.at>
CP	MMS/HCAI	x	x	x	Multimedia	SN	Face-voice Association and Impact of Multiple Languages	Please contact Shah Nawaz <shah.nawaz@jku.at>
CP	MMS/HCAI	x	x	x	Multimedia	SN	Emotion Recognition in Speech using Cross-Modal Transfer in the Wild	Please contact Shah Nawaz <shah.nawaz@jku.at>
CP	MMS/HCAI		x	x	Multimedia	SN	Deepfakes: A Multilingual Perspective	Please contact Shah Nawaz <shah.nawaz@jku.at>
CP		x	x	x	Deep Learning, Music Processing	JSr	Music audio similarity estimation with deep learning	
CP		x	x	x	Deep Learning, Music Processing	JSr	Music audio segmentation with deep learning	
CP		x	x	x	Deep Learning, Music Processing	JSr	Beat and downbeat tracking with deep learning	
CP		x	x	x	Deep Learning, Music Processing	JSr	Music audio generation with deep learning	
CP		x	x	x	Deep Learning, Machine Listening	JSr	Birdcall classification	
CP		x	x	x	Deep Learning, Machine Listening	JSr	Birdcall audio generation	
CP		x	x	x	Deep Learning, Machine Listening	JSr	Spatial 3D audio (Ambisonics): Sound event localization and detection	
CP		x	x	x	Machine Listening	JSr	Learnable alternatives to spectrograms (e.g., SincNet, LEAF)	
CP		x	x	x	Machine Listening	JSr	Denoising audio recordings	
CP		x			Machine Listening	KH	Adversarial Examples for Speech Recognition / Audio / MIR	
CP		x			Machine Listening	KH	Explainability of Machine Listening Models	
CP		x			Deep Learning	KH	Concept-Based Explanations	
CP		x			Deep Learning	KH	Evaluating Interpretability Methods	
CP		x			Deep Learning	KH	Adversarial Robustness	
CP		x			Deep Learning	KH	Counterfactual Explanations	
CP		x	x	x	Deep Learning	FS	Low-complexity Techniques for Deep Learning	Look into techniques such as Pruning, Knowledge Distillation, Quantization or efficient neural network designs
CP		x	x	x	Machine Listening, Deep Learning	FS	Acoustic Scene Classification	https://dcase.community/challenge2024/task-data-efficient-low-complexity-acoustic-scene-classification
CP		x	x	x	Machine Listening, Deep Learning	FS	Sound Event Detection	https://dcase.community/challenge2023/task-sound-event-detection-with-weak-labels-and-synthetic-soundscapes
CP		x	x	x	Machine Listening, Deep Learning	FS	Audio Tagging	https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9229505
CP		x	x	x	Machine Listening	PP	Language Models For Audio Tasks	https://arxiv.org/abs/2305.11834
CP		x	x	x	Machine Listening	PP	Language-Based Audio Retrieval	https://dcase.community/challenge2022/task-language-based-audio-retrieval
CP		x	x	x	Machine Listening	PP	Text-to-Audio Generation	e.g., https://arxiv.org/pdf/2309.08051
CP		x	x	x	Machine Listening	PP	Neural Audio Compression	https://arxiv.org/pdf/2210.13438
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Normalization: Free Performance Quantization (FP)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Normalization: Performance to Click Quantization (PC)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Normalization: MuseScore MIDI Normalization (MS)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Meter / Barline / Tie Estimation (MBT)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Key / Pitch Spelling Estimation (KPS)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Beaming / Grouping Estimation (BG)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Clef / Staff Estimation (CS)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Stemming / Voice Estimation (SV)	part of SCORIA project: cpjku.github.io/scoria
CP	SMPG	x	x	x	SCORIA Project	SP/PH/CC	MIDI Scorification: Ornamentation Classification (OC)	part of SCORIA project: cpjku.github.io/scoria
CP			x		Symbolic Music Processing	EK	Negative harmony generator with pitch constraints	
CP		x	x	x	Symbolic Music Processing	EK	Derivation system for symbolic music towards music generation	
CP			x		Symbolic Music Processing	EK	Microtonal toroidal Tonnetz spaces	
CP		x	x	x	Symbolic Music Processing	EK	Applications of Tonnetz representations in computational music analysis	
CP		x	x	x	Graph Neural Networks	EK	Sampling Strategies in Large Graphs	
CP		x	x	x	Graph Neural Networks	EK	Hierachical Graph Neural Networks	
CP		x	x	x	Graph Neural Networks	EK	Hyperbolic Graph Neural Networks	
CP		x	x	x	Graph Neural Networks	EK	Graph Neural Networks for music Analysis	
CP			x	x	Graph Neural Networks	EK	Graph Neural Networks for music Generation	
CP		x	x	x	Symbolic Music Processing	EK	Symbolic Music Boundary Detection / Segmentation	
CP			x	x	Symbolic Music Processing	FF	Parametrizable Jazz accompaniment generation	
CP			x	x	Symbolic Music Processing	FF	Computing and displaying differences of musical scores	
CP		x	x	x	Deep Learning	FF	Knowledge Distillation	
CP		x	x	x	Machine Listening, Symbolic Music Processing	FF	Chord / Harmony Recognition	
CP		x	x	x	Deep Learning, Music Processing	FF	Optical Music Recognition (OMR)	
CP			x	x	Machine Listening	FF	Deep learning for jazz dataset annotation	
CP		x	x	x	Symbolic Music Processing	FF	Local key estimation on symbolic music	
CP		x	x	x	NLP, Audio analysis, Digital Humanities	AFI	Lyrics and audio analysis of the Eurovision song contest	arthur.flexer@jku.at
CP		x	x	x	Deep Learning, Music Processing	MB	Evaluation of deep audio representations for music	
CP		x	x	x	Deep Learning, Music Processing	MB	Quantitative metrics for generated music	
CP		x	x	x	Deep Learning, Music Processing	MB	Controlability in music generation systems	
CP	MMS/HCAI		x	x	ML / NLP	AT	Fake news spreaders detection	
CP	MMS/HCAI		x	x	ML / NLP	AT	Fact-checkable claim detection	
CP	MMS/HCAI		x	x	ML / NLP	AT	Bias detection in legal documents	
CP	MMS/HCAI		x	x	ML / NLP	AT	Multimodal hate speech detection	
CP	MMS/HCAI		x	x	ML / RecSys	AT	Limiting misinformation spreading in recommender systems	
CP	MMS/HCAI		x	x	ML / RecSys	AT	Dynamic group preference modelling in recommender systems	
CP	MMS/HCAI		x	x	ML / RecSys	AT	LLM-based data augmentation for recommender systems	
CP	MMS/HCAI		x	x	ML / NLP	AT	Detection of persuasion techniques in memes	
CP	MMS/HCAI		x	x	ML / RecSys	AT	LLM-based explanations for recommendations	
CP	MMS/HCAI		x	x	ML / RecSys	AT	Long-term user satisfaction in recommendations	
CP	MMS/HCAI		x		ML / RecSys	DP/MS	(De-)biasing of graph based recommender systems	
CP	MMS/HCAI		x		ML / RecSys	DP/MS	Towards the disentanglement of private attributes in recommender systems	
CP	MMS/HCAI		x		ML / RecSys	DP/MS	Investigating information theoretical approaches to debiasing recommender systems	

Supervisor	Full name	Email
AFl	Arthur Flexer	arthur.flexer@jku.at
AT	Antonela Tommasel	antonela.tommasel@isistan.unicen.edu.ar
CC	Carlos Cancino-Chacón	carlos_eduardo.cancino_chacon@jku.at
DK	Deepak Kumar	deepak.kumar@jku.at
EK	Emmanouil Karystinaios	emmanouil.karystinaios@jku.at
FF	Francesco Foscarin	francesco.foscarin@jku.at
FS	Florian Schmid	florian.schmid@jku.at
GE	Gustavo Escobedo	gustavo.escobedo@jku.at
GW	Gerhard Widmer	gerhard.widmer@jku.at
JS	Josef Scharinger	josef.scharinger@jku.at
JSr	Jan Schlüter	jan.schlueter@jku.at
KH	Katharina Hoedt	katharina.hoedt@jku.at
MB	Mathias Bjare	mathias.bjare@jku.at
MS	Markus Schedl	markus.schedl@jku.at
PH	Patricia Hu	patricia.hu@jku.at
PP	Paul Primus	paul.primus@jku.at
SN	Shah Nawaz	shah.nawaz@jku.at
SP	Silvan Peter	silvan.peter@jku.at
VPr	Verena Praher	verena.praher@jku.at