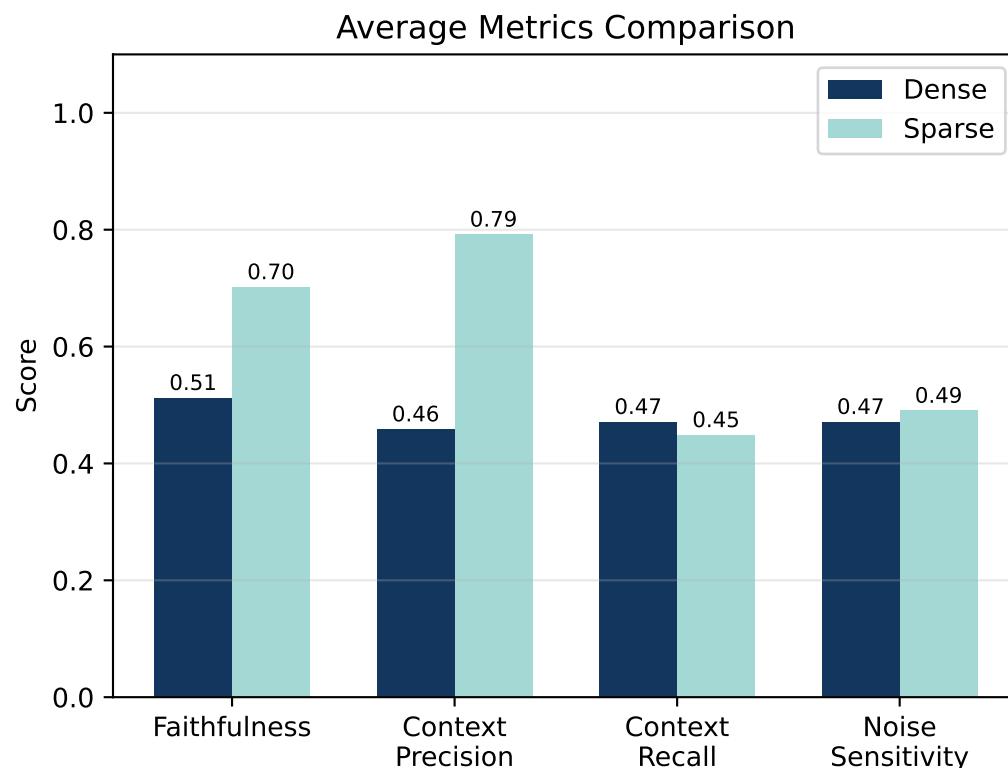
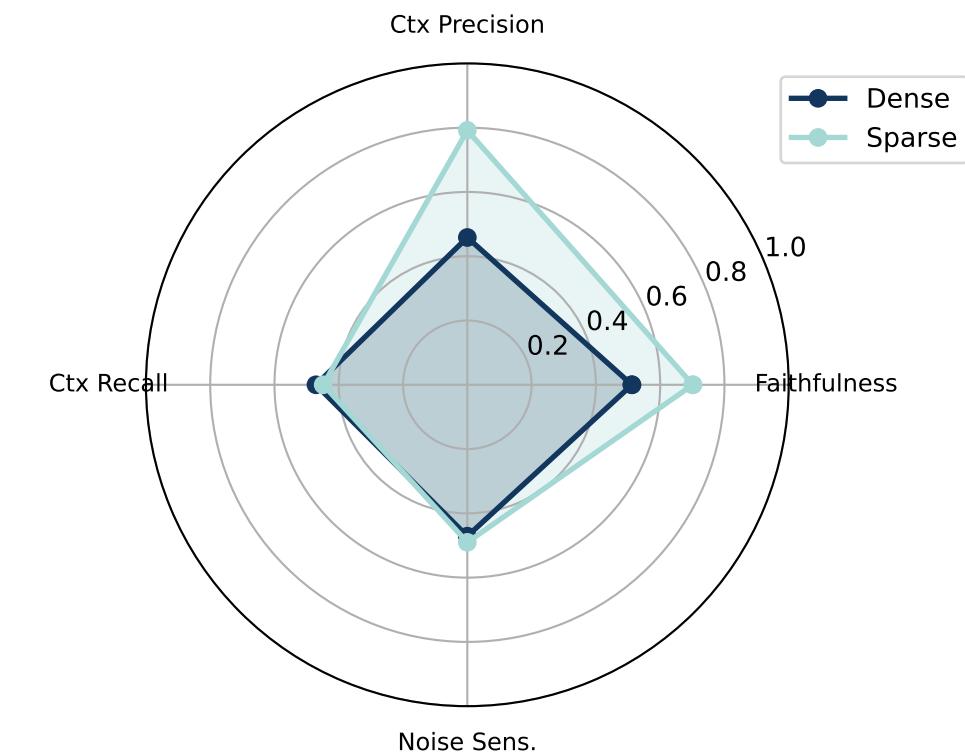


RAG Dense vs Sparse - Analysis Overview



Comparative Profile

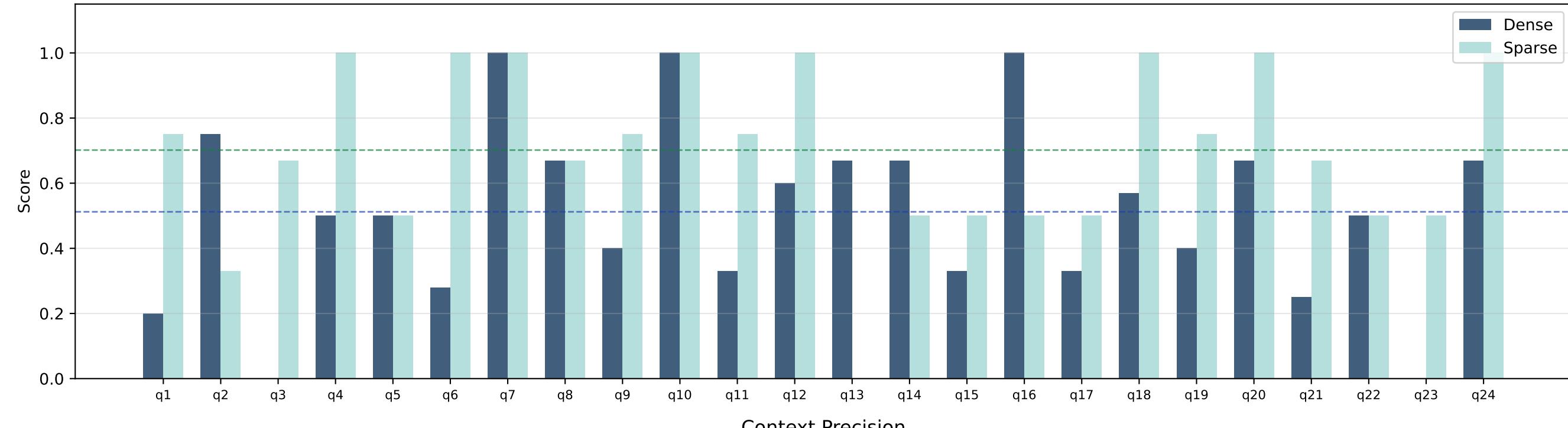


Descriptive Statistics

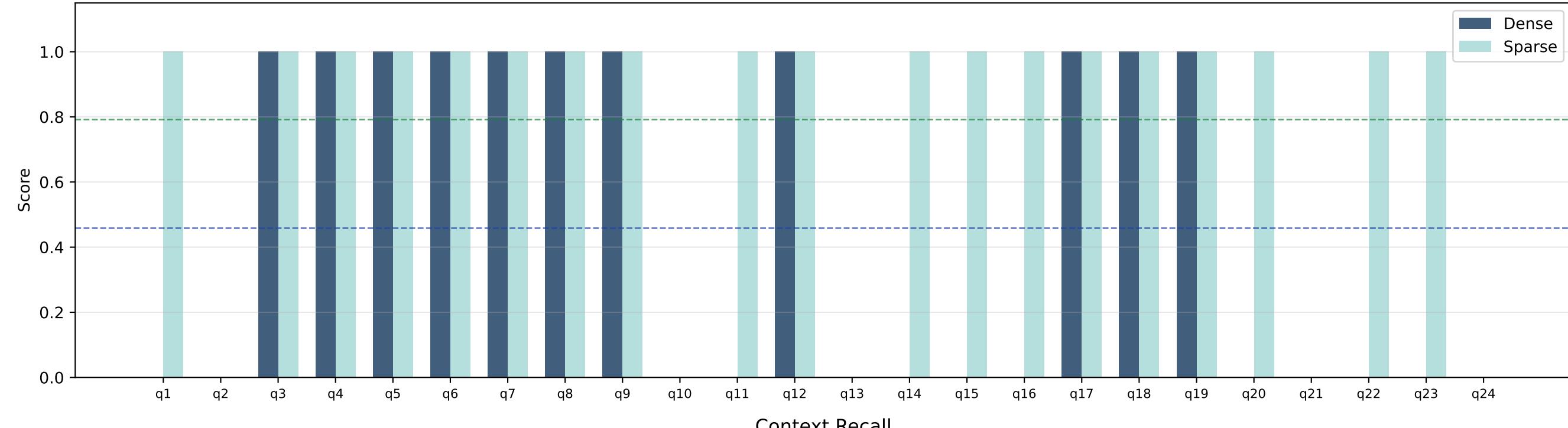
Metric	Dense μ	Dense σ	Sparse μ	Sparse σ	$\Delta (D-S)$
Faithfulness	0.512	0.272	0.702	0.261	-0.190
Ctx Precision	0.458	0.498	0.792	0.406	-0.333
Ctx Recall	0.471	0.420	0.448	0.358	0.023
Noise Sens.	0.471	0.420	0.490	0.361	-0.019

RAG Dense vs Sparse - Metric Breakdown by Question

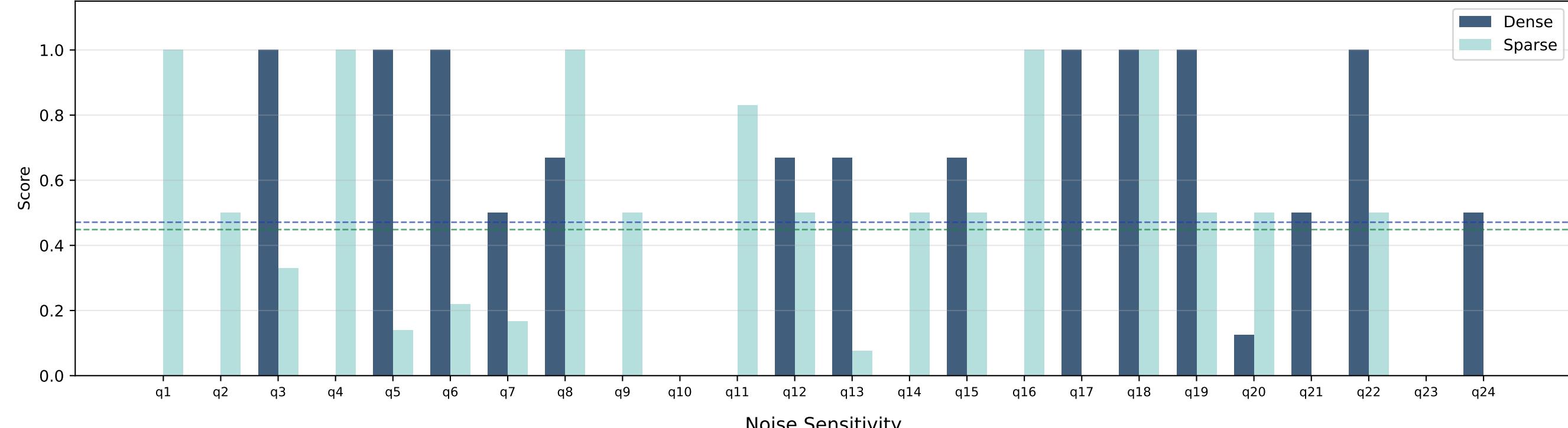
Faithfulness



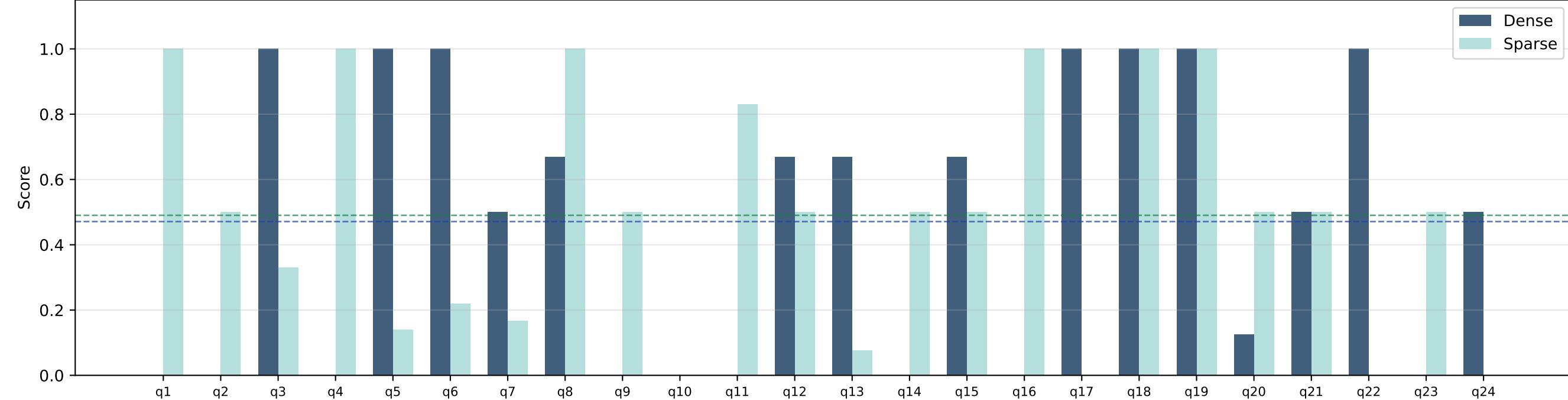
Context Precision



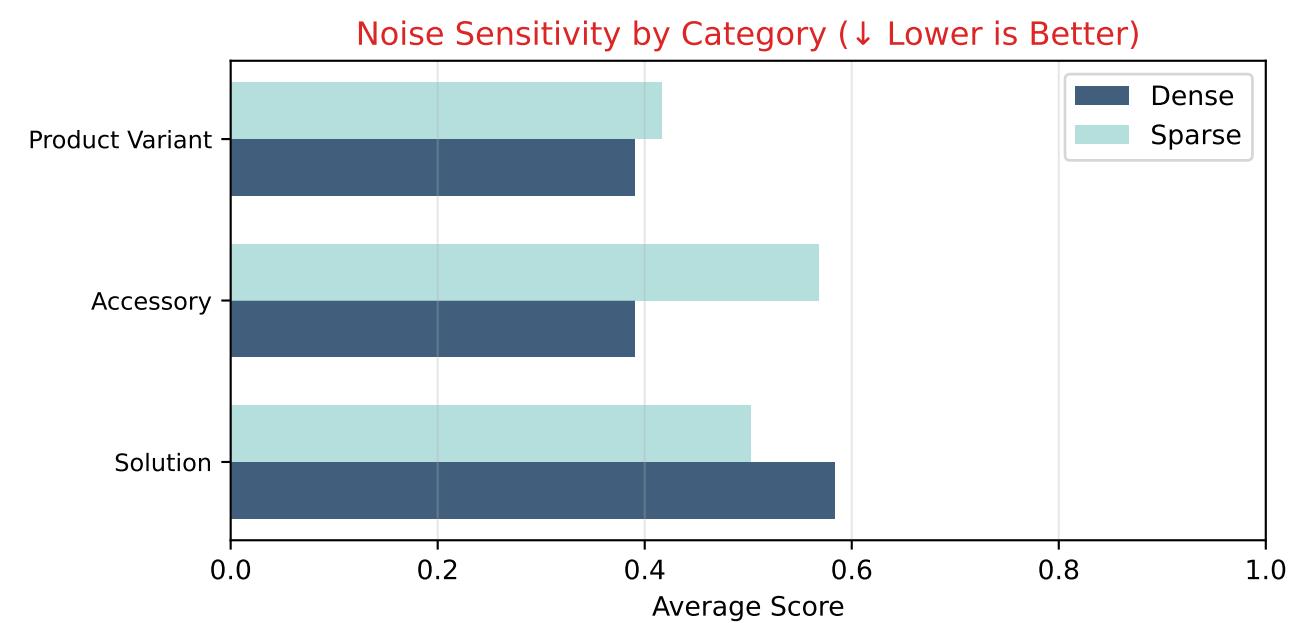
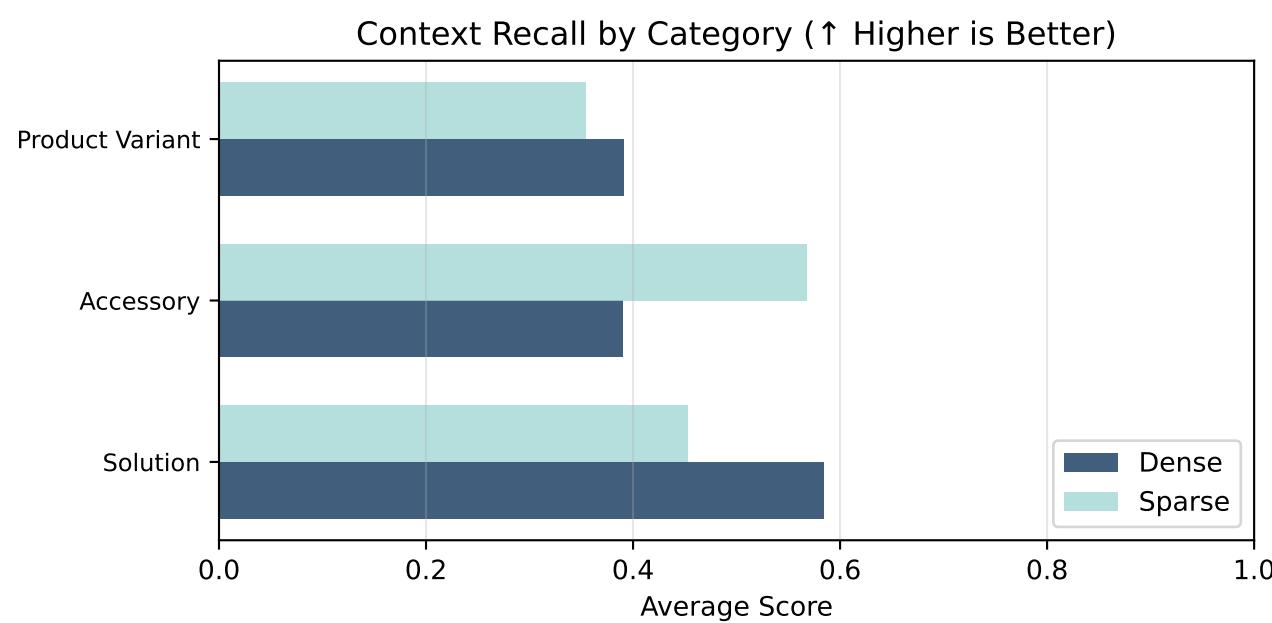
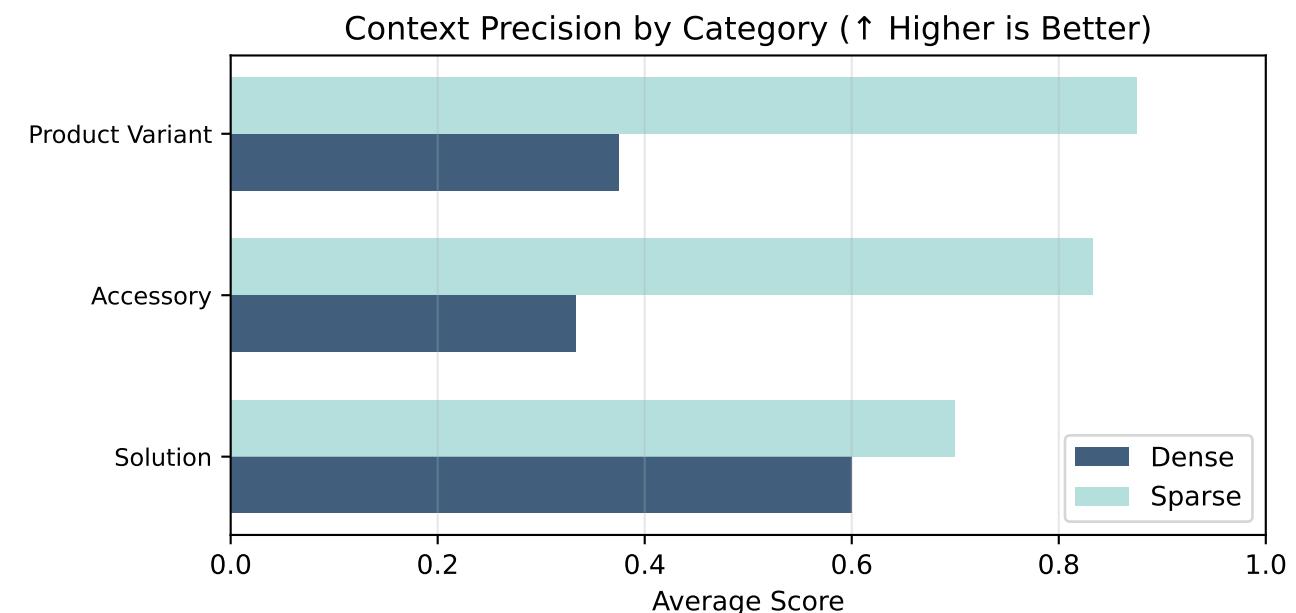
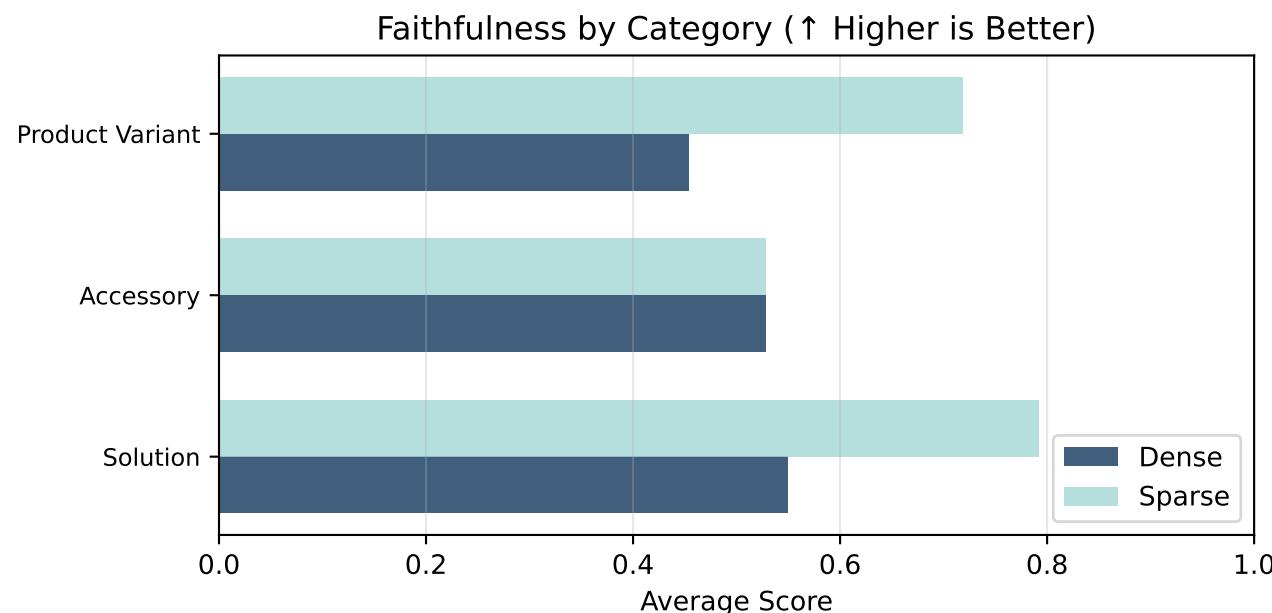
Context Recall



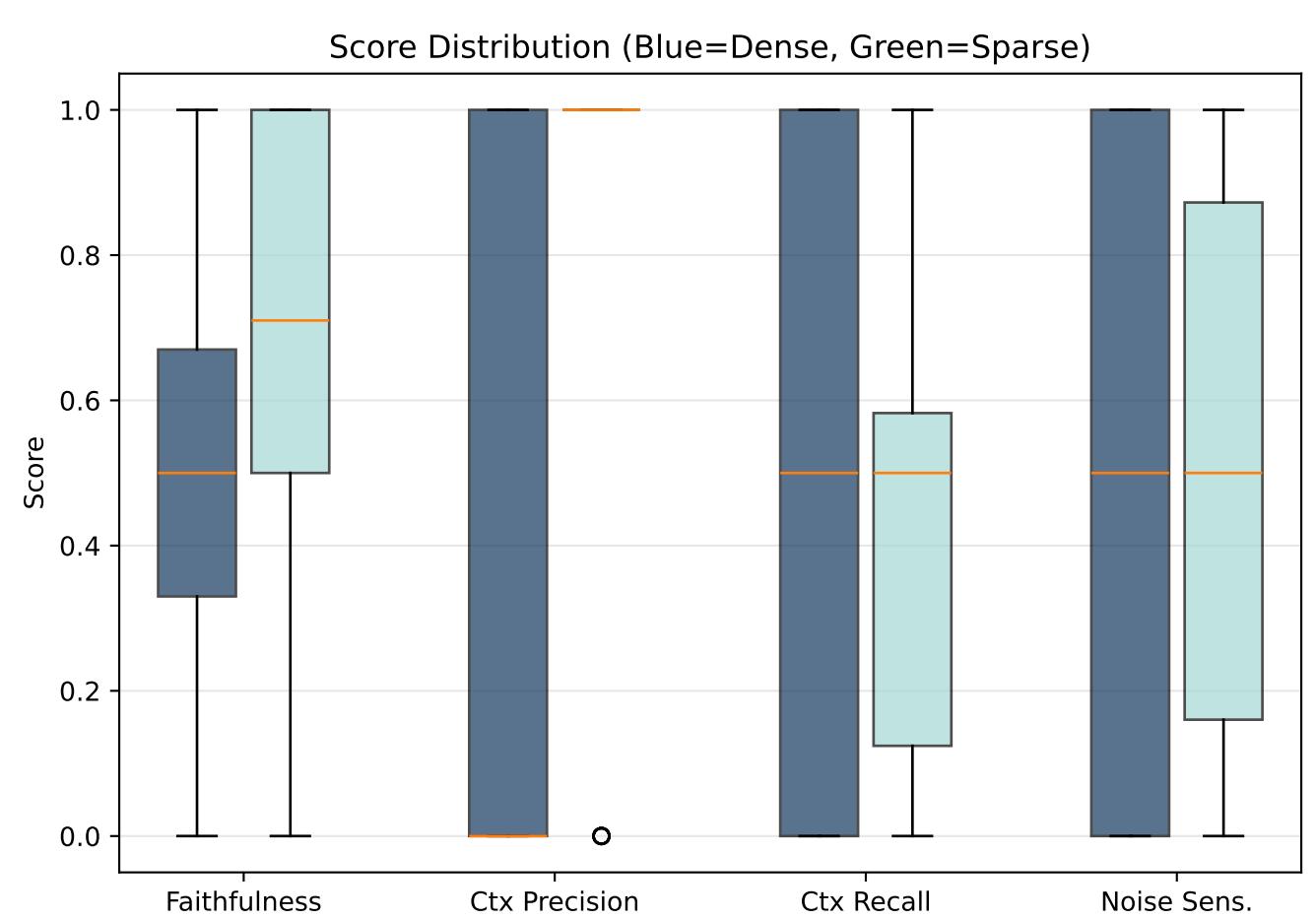
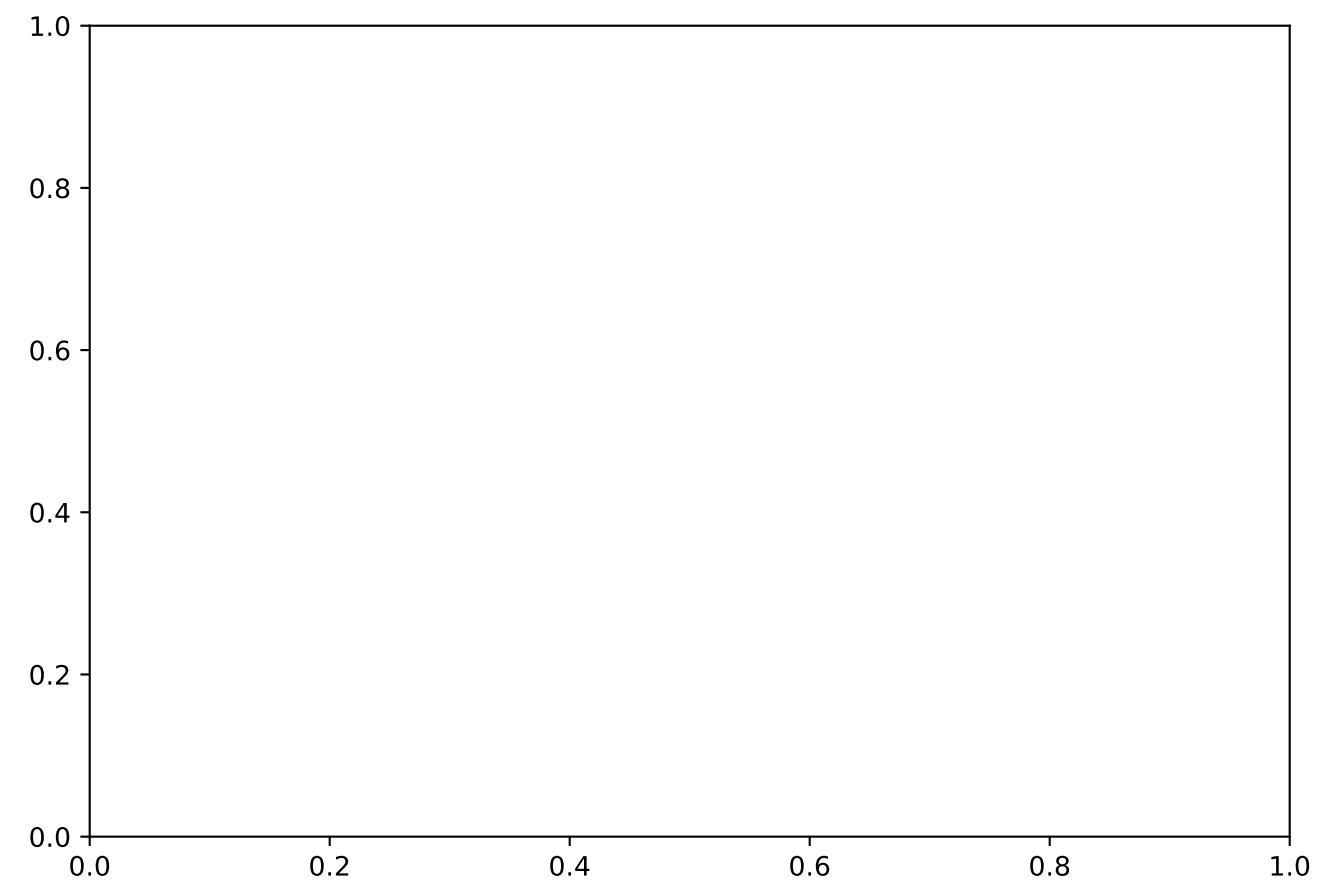
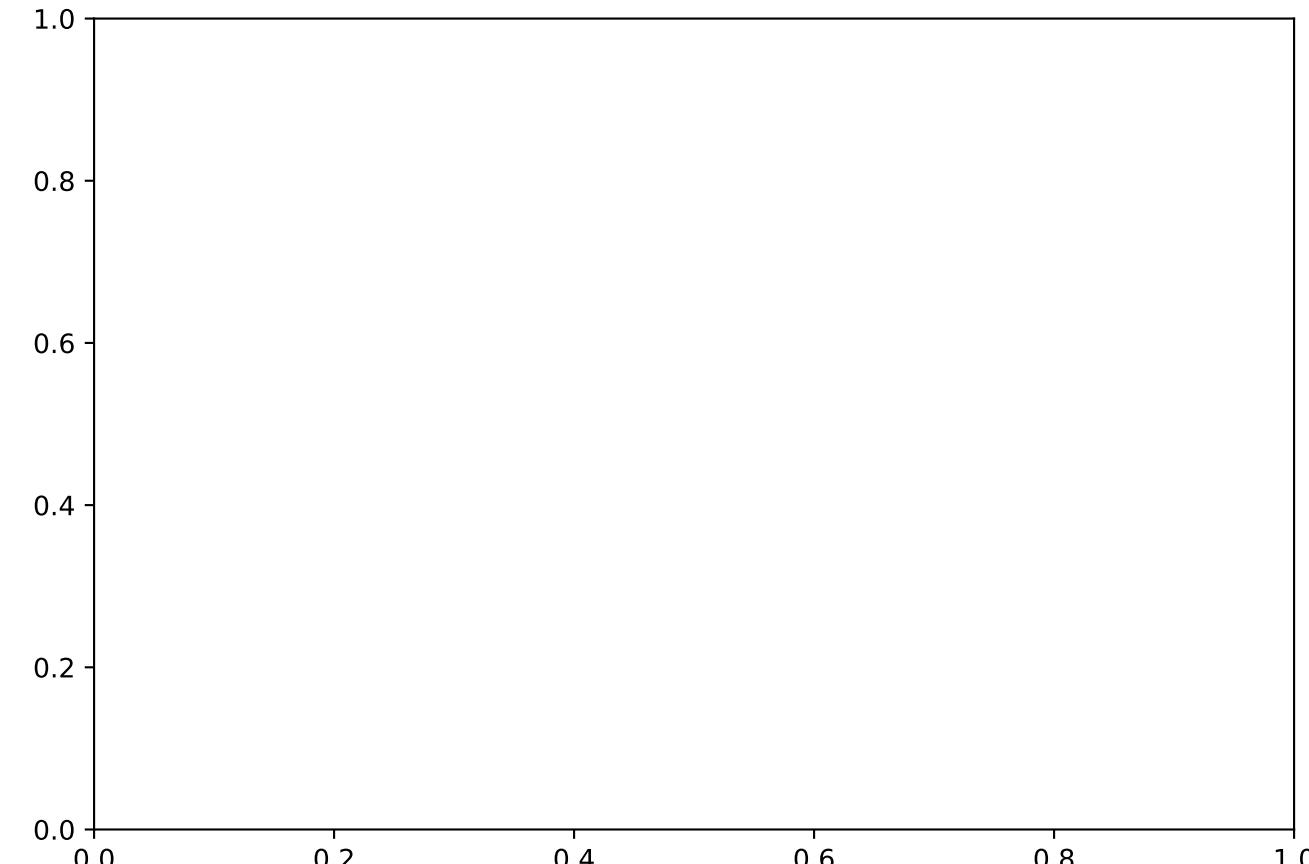
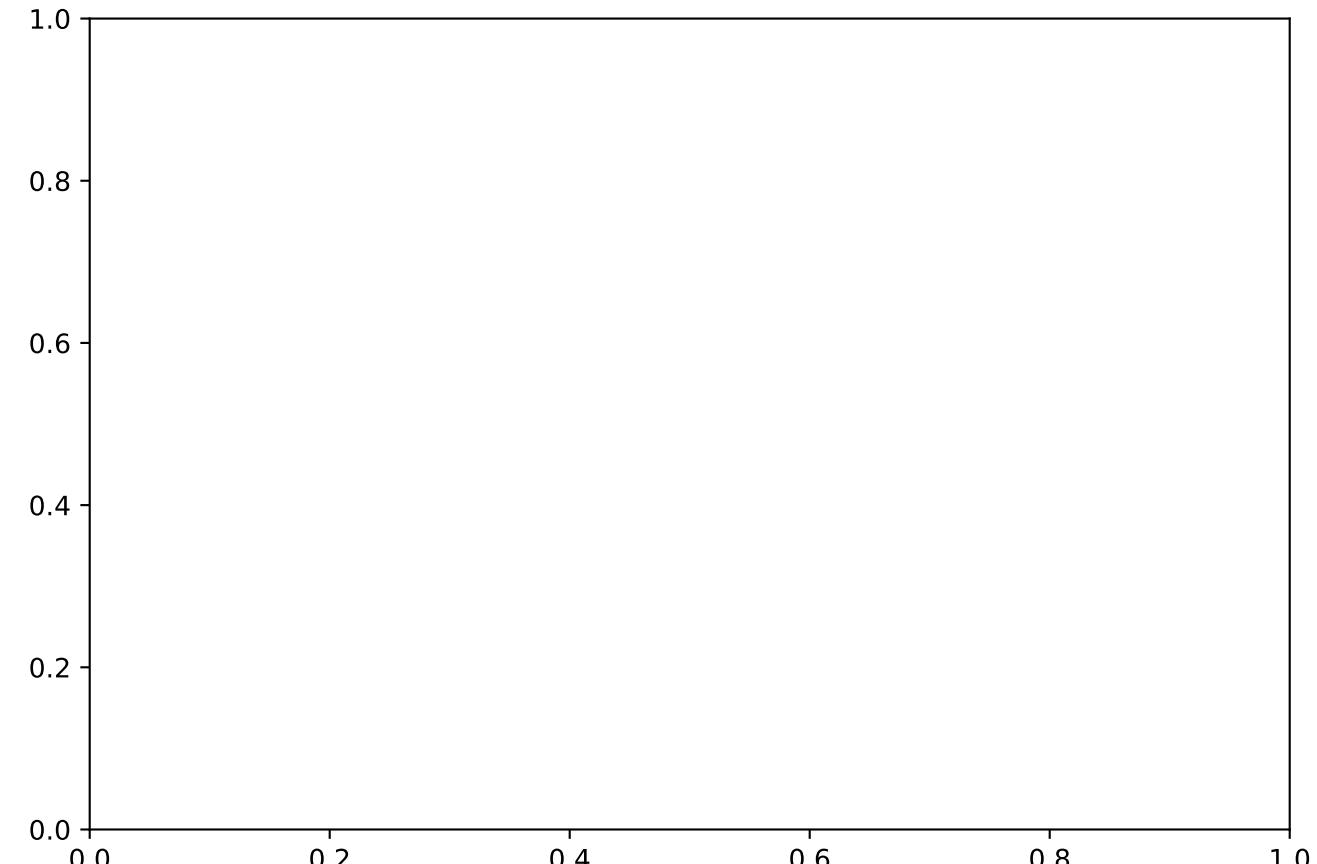
Noise Sensitivity



RAG Dense vs Sparse - Performance by Question Category



RAG Dense vs Sparse - Correlations & Insights



RAG Dense vs Sparse - Detailed Results Table

Q	Category	Faith D/S	Prec D/S	Rec D/S	Noise D/S	Total D/S	Win
q1	Solution	0.20/0.75	0/1	0.00/1.00	0.00/1.00	0.20/1.75	S
q2	Solution	0.75/0.33	0/0	0.00/0.50	0.00/0.50	0.75/0.33	D
q3	Accessory	0.00/0.67	1/1	1.00/0.33	1.00/0.33	1.00/1.67	S
q4	Accessory	0.50/1.00	1/1	0.00/1.00	0.00/1.00	1.50/2.00	S
q5	Solution	0.50/0.50	1/1	1.00/0.14	1.00/0.14	1.50/1.50	=
q6	Solution	0.28/1.00	1/1	1.00/0.22	1.00/0.22	1.28/2.00	S
q7	Solution	1.00/1.00	1/1	0.50/0.17	0.50/0.17	2.00/2.00	D
q8	Solution	0.67/0.67	1/1	0.67/1.00	0.67/1.00	1.67/1.67	=
q9	Product Vari	0.40/0.75	1/1	0.00/0.50	0.00/0.50	1.40/1.75	S
q10	Product Vari	1.00/1.00	0/0	0.00/0.00	0.00/0.00	1.00/1.00	=
q11	Product Vari	0.33/0.75	0/1	0.00/0.83	0.00/0.83	0.33/1.75	S
q12	Solution	0.60/1.00	1/1	0.67/0.50	0.67/0.50	1.60/2.00	S
q13	Accessory	0.67/0.00	0/0	0.67/0.08	0.67/0.08	0.67/0.00	D
q14	Accessory	0.67/0.50	0/1	0.00/0.50	0.00/0.50	0.67/1.50	S
q15	Accessory	0.33/0.50	0/1	0.67/0.50	0.67/0.50	0.33/1.50	S
q16	Accessory	1.00/0.50	0/1	0.00/1.00	0.00/1.00	1.00/1.50	S
q17	Product Vari	0.33/0.50	1/1	1.00/0.00	1.00/0.00	1.33/1.50	S
q18	Solution	0.57/1.00	1/1	1.00/1.00	1.00/1.00	1.57/2.00	S
q19	Product Vari	0.40/0.75	1/1	1.00/0.50	1.00/1.00	1.40/1.25	D
q20	Product Vari	0.67/1.00	0/1	0.12/0.50	0.12/0.50	0.67/2.00	S
q21	Solution	0.25/0.67	0/0	0.50/0.00	0.50/0.50	0.25/0.17	D
q22	Product Vari	0.50/0.50	0/1	1.00/0.50	1.00/0.00	0.50/2.00	S
q23	Product Vari	0.00/0.50	0/1	0.00/0.00	0.00/0.50	0.00/1.00	S
q24	Solution	0.67/1.00	0/0	0.50/0.00	0.50/0.00	0.67/1.00	S

RAG Dense vs Sparse - Question Details

Q	Question Text	Category
q1	ISO standards room acoustics/speech intelligibilit	Solution
q2	Façade sound insulation testing	Solution
q3	Calibrated speech intelligibility with DIRAC	Accessory
q4	ISO 3382 room acoustics measurements	Accessory
q5	ISO 9612 workplace noise exposure	Solution
q6	Environmental noise complaints investigation	Solution
q7	Exhaust noise in vehicles	Solution
q8	Toys and machinery noise emissions	Solution
q9	HBK 2255 long-term environmental monitoring	Product Variant
q10	HBK 2255 workplace noise ISO 9612	Product Variant
q11	HBK 2255 sound insulation testing	Product Variant
q12	Software module isolating noise events	Solution
q13	Loudspeaker airborne sound insulation	Accessory
q14	Amplifier for OmniPower concert halls	Accessory
q15	Amplifier remote control mobile device	Accessory
q16	ISO 3382 reverberation time office buildings	Accessory
q17	B&K 2245 sound power measurements	Product Variant
q18	B&K 2245 ISO 3744 software	Solution
q19	B&K 2245 environmental noise surveys	Product Variant
q20	Roadside exhaust noise enforcement	Product Variant
q21	Quick spot checks urban environments	Solution
q22	HBK 2255 basic environmental monitoring	Product Variant
q23	HBK 2255 environmental + calibrator	Product Variant
q24	Community noise monitoring mobile app	Solution