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| Artificial Intelligence | |
| **SOURCE: 01** | **Artificial Intelligence (GATE EXAM)** |
| 01 | [Artificial Intelligence Syllabus and Analysis](https://www.youtube.com/watch?v=uB3i-qV6VdM&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=1&pp=iAQB) |
| 02 | [What is Artificial Intelligence | Lear AI with Real Life Examples](https://www.youtube.com/watch?v=s-s9ilkMVj8&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=2&pp=iAQB) |
| 03 | [What is State Space Search | Introduction to Problem Solving](https://www.youtube.com/watch?v=E5jVBqe59EE&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=3&pp=iAQB) |
| 04 | [Uninformed vs Informed Search with Example](https://www.youtube.com/watch?v=gZpUcsB9TFc&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=4&pp=iAQB) |
| 05 | [Breadth First Search with Example | Uninformed Search](https://www.youtube.com/watch?v=qul0f79gxGs&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=5&pp=iAQB) |
| 06 | [Depth First Search (DFS) with Example | Uninformed Search](https://www.youtube.com/watch?v=f8luGFRtshY&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=6&pp=iAQB) |
| 07 | [Bidirectional Search Algorithm with Real Life Example](https://www.youtube.com/watch?v=rEema9uQ02c&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=7&pp=iAQB) |
| 08 | [8-Puzzle Problem without Heuristic](https://www.youtube.com/watch?v=_CrEYrcImv0&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=8&pp=iAQB) |
| 09 | [What is Heuristic in AI | Why we use Heuristic | How to Calculate Heuristic](https://www.youtube.com/watch?v=5F9YzkpnaRw&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=9&pp=iAQB) |
| 10 | [How to Solve 8-Puzzle Problem with Heuristic (Informed Search)](https://www.youtube.com/watch?v=nmWGhb9E4es&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=10&pp=iAQB) |
| 11 | [Generate and Test Search with Real Life Example](https://www.youtube.com/watch?v=h-AfcPvpld4&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=11&pp=iAQB) |
| 12 | [Best First Search Algorithm | How It Works | Pros and Cons](https://www.youtube.com/watch?v=7ffDUDjwz5E&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=12&pp=iAQB) |
| 13 | [Beam Search Algorithm | Heuristic Search Techniques](https://www.youtube.com/watch?v=jhoXO1XF6Fk&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=13&pp=iAQB) |
| 14 | [Hill Climbing Algorithm with Real Live Examples](https://www.youtube.com/watch?v=3SiWtAnUROs&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=14&pp=iAQB) |
| 15 | [A\* Algorithm with Examples](https://www.youtube.com/watch?v=tvAh0JZF2YE&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=15&pp=iAQB) |
| 16 | [How to Proof A\* Admissible | Underestimation and Overestimation of A\*](https://www.youtube.com/watch?v=xz1Nq6cZejI&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=16&pp=iAQB) |
| 17 | [AO\* Algorithm with Example](https://www.youtube.com/watch?v=u_TE42-uWD0&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=17&pp=iAQB) |
| 18 | [Introduction to Game Playing Algorithm with Example](https://www.youtube.com/watch?v=FFzdXJ49KAI&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=18&pp=iAQB) |
| 19 | [Minimax Algorithm in Game Playing](https://www.youtube.com/watch?v=Ntu8nNBL28o&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=19&pp=iAQB) |
| 20 | [Alpha Beta Pruning with Example](https://www.youtube.com/watch?v=dEs_kbvu_0s&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=20&pp=iAQB) |
| 21 | [Knowledge Representation and Reasoning | Logic, Semantic Net, Frames Etc](https://www.youtube.com/watch?v=9iN3O_oL2ac&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=21&pp=iAQB) |
| 22 | [Propositional Logic in Artificial Intelligence | Knowledge Representation](https://www.youtube.com/watch?v=6490tKrGEic&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=22&pp=iAQB) |
| 23 | [Introduction to Intelligent Agents and Their Types with Examples](https://www.youtube.com/watch?v=BkedAnQfJ_U&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=23&pp=iAQB) |
| 24 | [Simple Reflex Agent with Example](https://www.youtube.com/watch?v=KZFfbebQPAU&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=24&pp=iAQB) |
| 25 | [Model Based Reflex Agent with Real Live Example](https://www.youtube.com/watch?v=xKxh3fQwU8E&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=25&pp=iAQB) |
| 26 | [Goal Based Agents with Real Life Example](https://www.youtube.com/watch?v=HsdiMkKnNLk&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=26&pp=iAQB) |
| 27 | [Utility Based Agents with Real Live Examples](https://www.youtube.com/watch?v=e-egxFtAF_4&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=27&pp=iAQB) |
| 28 | [Fuzzy Logic with Examples](https://www.youtube.com/watch?v=vof2vhfqoBo&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=28&pp=iAQB) |
| 29 | [Various Operations in Fuzzy Logic with Examples](https://www.youtube.com/watch?v=o-2O4fmIu3E&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=29&pp=iAQB) |
| 30 | [Introduction to Neural Networks with Examples](https://www.youtube.com/watch?v=EYeF2e2IKEo&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=30&pp=iAQB) |
| 31 | [Natural Language Processing | NLP with Demo and Example](https://www.youtube.com/watch?v=bPpwZxasJo0&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=31&pp=iAQB) |
| 32 | [Supervised, Unsupervised and Reinforcement Learning](https://www.youtube.com/watch?v=4dwsSz_fNSQ&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=32&pp=iAQB) |
| 33 | [Genetic Algorithm | Simplest Explanation with Real Life Example](https://www.youtube.com/watch?v=96-u9s6D16k&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=33&pp=iAQB) |
| 34 | [What is Constraint Satisfaction | Constraint Satisfaction Problem (CSP) with Example](https://www.youtube.com/watch?v=AgyCSmDVk5s&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=34&pp=iAQB) |
| 35 | [How Constraint Satisfaction Algorithm Works | Explained with Interesting Example](https://www.youtube.com/watch?v=udOfKqeLVSg&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=35&pp=iAQB) |
| 36 | [Branch and Bound Algorithm with Examples | Easiest Explanation of B&B with Examples](https://www.youtube.com/watch?v=XZbrmetb9VE&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=36&pp=iAQB) |
| 37 | [0/1 Knapsack Using Branch and Bound with Examples](https://www.youtube.com/watch?v=CwM-Mv0Bm4Y&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=37&pp=iAQB) |
| 38 | [Reasoning Under Uncertainty](https://www.youtube.com/watch?v=MIf5shIfsj8&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=38&pp=iAQB) |
| 39 | [When There is Uncertainty](https://www.youtube.com/watch?v=PKeOJ4a2DNc&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=39&pp=iAQB) |
| 40 | [Informed vs Uninformed vs Adversarial Search with Examples](https://www.youtube.com/watch?v=YatDNnaJ1TU&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=40&pp=iAQB) |
| 41 | [Propositional Logic](https://www.youtube.com/watch?v=519FvcUQqYU&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=41&pp=iAQB) |
| 42 | [Predicate Logic](https://www.youtube.com/watch?v=FpGeg27Ffk8&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=42&pp=iAQB) |
| 43 | [How to Write First Order / Predicate Logic](https://www.youtube.com/watch?v=Aw3EOSr64j0&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=43&pp=iAQB) |
| 44 | [Negation of Quantifiers | Predicate Logic | Logic with Certainty](https://www.youtube.com/watch?v=XYfTz5gziBk&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=44&pp=iAQB) |
| 45 | [Bayes Theorem and Total Probability with Examples](https://www.youtube.com/watch?v=SktJqrYereQ&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=45&pp=iAQB) |
| 46 | [Bayesian Network with Examples | Easiest Explanation](https://www.youtube.com/watch?v=DVnubVOjZtg&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=47&pp=iAQB) |
| 47 | [Likelihood Weight Sampling | Inference Through Sampling | Uncertainty](https://www.youtube.com/watch?v=D4x0NB5cKGE&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=49&pp=iAQB) |
| 48 | [Rejection sampling | Probabilistic Inference | Sampling](https://www.youtube.com/watch?v=ilmJD8tRg-Q&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=51&pp=iAQB) |
| 49 | [Probabilistic Inference | Sampling](https://www.youtube.com/watch?v=kGlR6gBIjTk&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=52&pp=iAQB) |
| 50 | [Bayesian Network Numerical Example](https://www.youtube.com/watch?v=zLlKc8AePIQ&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=53&pp=iAQB) |
| 51 | [Understand Artificial Neural Networks form Basics with Examples | Components | Work](https://www.youtube.com/watch?v=1TmUwRALJW0&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=54&pp=iAQB) |
| 52 | [Token & Parameters in Llama3 META Models | 8B & 70B Parameters Model | GPT Model](https://www.youtube.com/watch?v=UcFhiOtNHsQ&list=PLxCzCOWd7aiHGhOHV-nwb0HR5US5GFKFI&index=55&pp=iAQB) |

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| Machine Learning | |
| **SOURCE: 01** | **Data Science and Machine Learning (GATE EXAM)** | |
| 01 | [Introduction to Data Science & ML & Roadmap](https://www.youtube.com/watch?v=kz184QIO4ZQ&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=1&pp=iAQB) | |
| 02 | [Supervised Learning Algorithms](https://www.youtube.com/watch?v=LKlOH8OLLcw&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=2&pp=iAQB) | |
| 03 | [Introduction to Regression with Real Life Examples](https://www.youtube.com/watch?v=cHT-qLnRm0E&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=3&pp=iAQB) | |
| 04 | [Linear Regression with Real Life Examples and Calculations | Easiest Explanation](https://www.youtube.com/watch?v=zUQr6HAAKp4&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=4&pp=iAQB) | |
| 05 | [Logistic Regression with Simplest and Easiest Example](https://www.youtube.com/watch?v=r8OjlgWpAI0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=5&pp=iAQB) | |
| 06 | [Linear Regression vs Logistic Regression | Supervised Learning](https://www.youtube.com/watch?v=BVP1EDKb6_g&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=6&pp=iAQB) | |
| 07 | [kNN Classification with Real Life Example | Movie Imdb Example | Supervised Learning](https://www.youtube.com/watch?v=O1nWXTXcCwI&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=7&pp=iAQB) | |
| 08 | [Naïve Bayes Classification Full Explanation with Examples](https://www.youtube.com/watch?v=GBMMtXRiQX0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=8&pp=iAQB) | |
| 09 | [Introduction to Decision Tree with Real Life Examples](https://www.youtube.com/watch?v=mvveVcbHynE&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=9&pp=iAQB) | |
| 10 | [Decision Tree | ID3 Algorithm with Examples and Calculations](https://www.youtube.com/watch?v=CWzpomtLqqs&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=10&pp=iAQB) | |
| 11 | [Conditional Probability with Easiest Explanations and Example](https://www.youtube.com/watch?v=dQ6RL8qe320&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=11&pp=iAQB) | |
| 12 | [Introduction to Ensemble Learning with Real Life Examples](https://www.youtube.com/watch?v=qQjOWmf8I_I&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=12&pp=iAQB) | |
| 13 | [K-Mean Clustering with Numerical Example | Unsupervised Learning](https://www.youtube.com/watch?v=5FpsGnkbEpM&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=13&pp=iAQB) | |
| 14 | [Hierarchical Clustering | Agglomerative vs Divisive with Examples](https://www.youtube.com/watch?v=zxQF8Rmpk1M&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=14&pp=iAQB) | |
| 15 | [Single Linkage clustering | Agglomerative Clustering | Hierarchical Clustering](https://www.youtube.com/watch?v=pbTQQCA9Xs0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=15&pp=iAQB) | |
| 16 | [Complete Linkage | Clustering with Example | Clustering in Unsupervised Learning](https://www.youtube.com/watch?v=Ufzq9oLhzX0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=16&pp=iAQB) | |
| 17 | [K-medoids Clustering with Numerical Example](https://www.youtube.com/watch?v=FosEwkYIGmU&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=17&pp=iAQB) | |
| 18 | [Random Forest in Machine Learning](https://www.youtube.com/watch?v=DXqxXe3rep0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=18&pp=iAQB) | |
| 19 | [kNN for Classified and Regression with Easiest Explanation](https://www.youtube.com/watch?v=zqQ_pi6j2jE&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=19&pp=iAQB) | |
| 20 | [Mean, Median, Mode with Real Life Examples](https://www.youtube.com/watch?v=keLk7odKCsE&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=20&pp=iAQB) | |
| 21 | [Standard Deviation and Variance with Examples](https://www.youtube.com/watch?v=D9xfxOzOwrQ&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=21&pp=iAQB) | |
| 22 | [Bagging / Bootstrap Aggregating with Examples](https://www.youtube.com/watch?v=Oq27arfMwA0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=22&pp=iAQB) | |
| 23 | [Supervised vs Unsupervised Learning with Real Life Examples](https://www.youtube.com/watch?v=fM8XdC1EweU&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=23&pp=iAQB) | |
| 24 | [Python Code for Mean, Median, Mode, SD< Variance and Range](https://www.youtube.com/watch?v=oYKuCCxlWbk&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=24&pp=iAQB) | |
| 25 | [How Weights are Increased in Boosting| Ensemble Learning](https://www.youtube.com/watch?v=nr7gNJ95geI&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=25&pp=iAQB) | |
| 26 | [BAGGING vs BOOSTING vs STACKING in Ensemble Learning](https://www.youtube.com/watch?v=j9jGLwPa6_E&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=26&pp=iAQB) | |
| 27 | [Bayes Theorem and Total Probability with Examples](https://www.youtube.com/watch?v=SktJqrYereQ&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=27&pp=iAQB) | |
| 28 | [Cross Validation in Machine Learning with Examples](https://www.youtube.com/watch?v=v6DtYYafrWQ&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=28&pp=iAQB) | |
| 29 | [Pearson’s Correlation Coefficient | Supervised Learning | Data Science and ML](https://www.youtube.com/watch?v=9Zzqb82lkcU&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=29&pp=iAQB) | |
| 30 | [kNN (k Nearest Neighbor) Numerical Examples | Supervised Learning](https://www.youtube.com/watch?v=mjoAoX--2fg&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=30&pp=iAQB) | |
| 31 | [Decision Tree Example | Calculate Entropy, Information Gain | Supervised Learning](https://www.youtube.com/watch?v=DnhVLfjlGXE&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=31&pp=iAQB) | |
| 32 | [Single Linkage Clustering Example | Unsupervised Learning](https://www.youtube.com/watch?v=CcPzgFFE_pY&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=32&pp=iAQB) | |
| 33 | [Token and Parameters in Llama3 META Models | 8B and 70B Parameters Model | GPT](https://www.youtube.com/watch?v=UcFhiOtNHsQ&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=33&pp=iAQB) | |
| 34 | [What is Data Preprocessing and Data Clearing | Various Techniques with Examples](https://www.youtube.com/watch?v=tDu_KIlXaB0&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=34&pp=iAQB) | |
| 35 | [How to Deal with Missing Values in Dataset | Data Processing and Clearing, Imputation](https://www.youtube.com/watch?v=KfC7VfDfn8I&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=35&pp=iAQB) | |
| 36 | [kNN Imputation with Examples | Data Preprocessing and Data Clearing](https://www.youtube.com/watch?v=bRWNJjzrZ-w&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=36&pp=iAQB) | |
| 37 | [Fit() and Transfer() Method | Data Preprocessing](https://www.youtube.com/watch?v=f3n-SZzPu7U&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=37&pp=iAQB) | |
| 38 | [Feature Extraction in Data Preprocessing](https://www.youtube.com/watch?v=lzWcVVCXMfo&list=PLxCzCOWd7aiEXg5BV10k9THtjnS48yI-T&index=38&pp=iAQB) | |