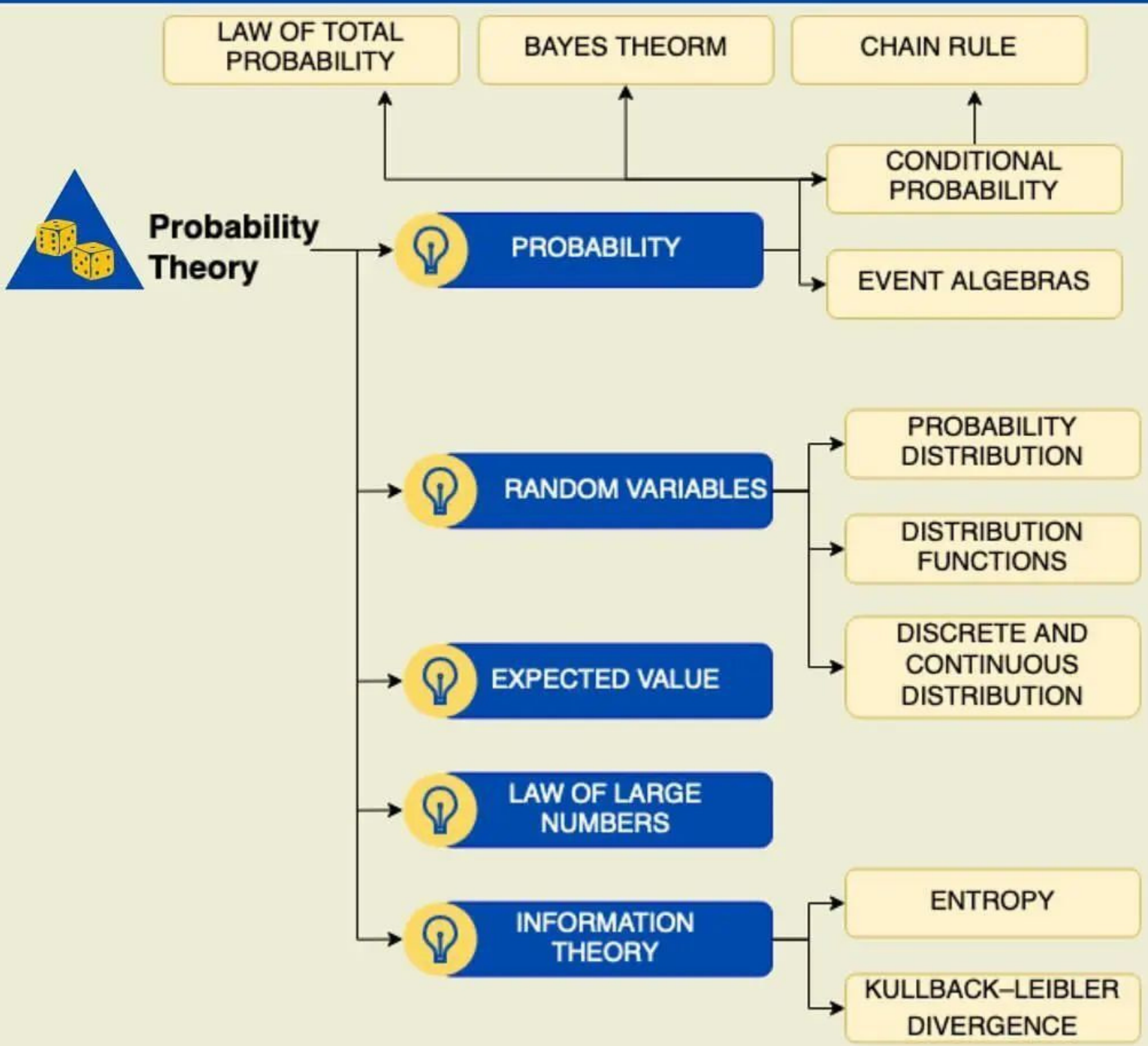
Roadmap of Mathematics for Deep Learning

Roadmap of Mathematics for Deep Learning -



Roadmap of Mathematics for Deep Learning -

Multi-variable Calculus

DIFFERENTIATION

- Partial Derivatives
- Gradients
- Total Derivatives
  - Multivariable Chain Rule
  - Directional Drivatives
- High Order Derivatives
  - Jacobian and Hessian

INTREGRATION

- Fubini's Theorm
- Multiple Integrals

Probability Theory

Roadmap of Mathematics for Deep Learning -

Calculus

- DIFFERENTIATION
  - Chain Rule
  - Minima and Maxima
- INTREGRATION
  - Riemann Integrals
  - Newton Leibniz Rule

Multi-variable Calculus →

Probability Theory →

Roadmap of Mathematics for Deep Learning -

Linear Algebra

- VECTOR SPACES
  - Linear Transformations
  - Normed Spaces
  - Basis / Orthogonal Basis
- MATRIX AND THEIR OPERATIONS
  - Transformations and Matrices
- DETERMINANTS
- EIGENVALUES AND EIGENVECTORS
- MATRIX DECOMPOSITION
  - Linear Transformations
  - Basis / Orthogonal Basis

Calculus

Multi-Variable Calculus

Probability Theory