

MATH TOPICS FOR DATA SCIENCE



Statistics

- Descriptive statistics
- Central tendency
- Variance
- Covariance
- Correlation
- Bayes' theorem
- Conditional probability
- Probability calculus
- Uniform distribution
- Normal distribution
- Binomial distribution
- Chi-square
- Student's t-distribution
- Central limit theorem
- Sampling
- Hypothesis testing
- AB testing
- Confidence intervals
- p-values
- ANOVA
- t-test

Statistics

Youtube

- **StatQuest**
- **3Blue1Brown**
- **KhanAcademy**

Courses

- **Statistics with R Specialization (Coursera)**
- **Business statistics and analysis specialization (Coursera)**
- **(Udacity) Inferential and Descriptive Statistics**

Linear Algebra

- Scalar multiplication
- Linear transformation
- Transpose
- Conjugate
- Rank
- Determinant
- Matrix multiplication
- Matrix inverse
- Matrix factorization
- LU decomposition
- Gaussian/Gauss-Jordan
- elimination
- Eigenvalues & eigenvectors
- Singular value decomposition

Linear Algebra

Youtube

- MIT
- 3Blue1Brown
- KhanAcademy

Courses

- Mathematics for machine learning: linear algebra (Coursera)
- Computational Linear Algebra for coders by fast.ai
- Linear algebra: foundations to frontiers (EDX)

Calculus

- Functions of a single variable
- Limit
- Continuity
- Differentiability
- Mean value theorems
- Maxima and minima
- Product and chain rule
- Taylor's series
- Fundamental and mean value-theorems of integral calculus
- Beta and gamma functions
- Functions of multiple variables
- Basics of ordinary and partial differential equations

Calculus

Youtube

- MIT
- 3Blue1Brown
- KhanAcademy

Courses

- Thomas calculus
- Mathematics for machine learning: multivariable calculus (coursera)



Which topic do you want me to
cover next?



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