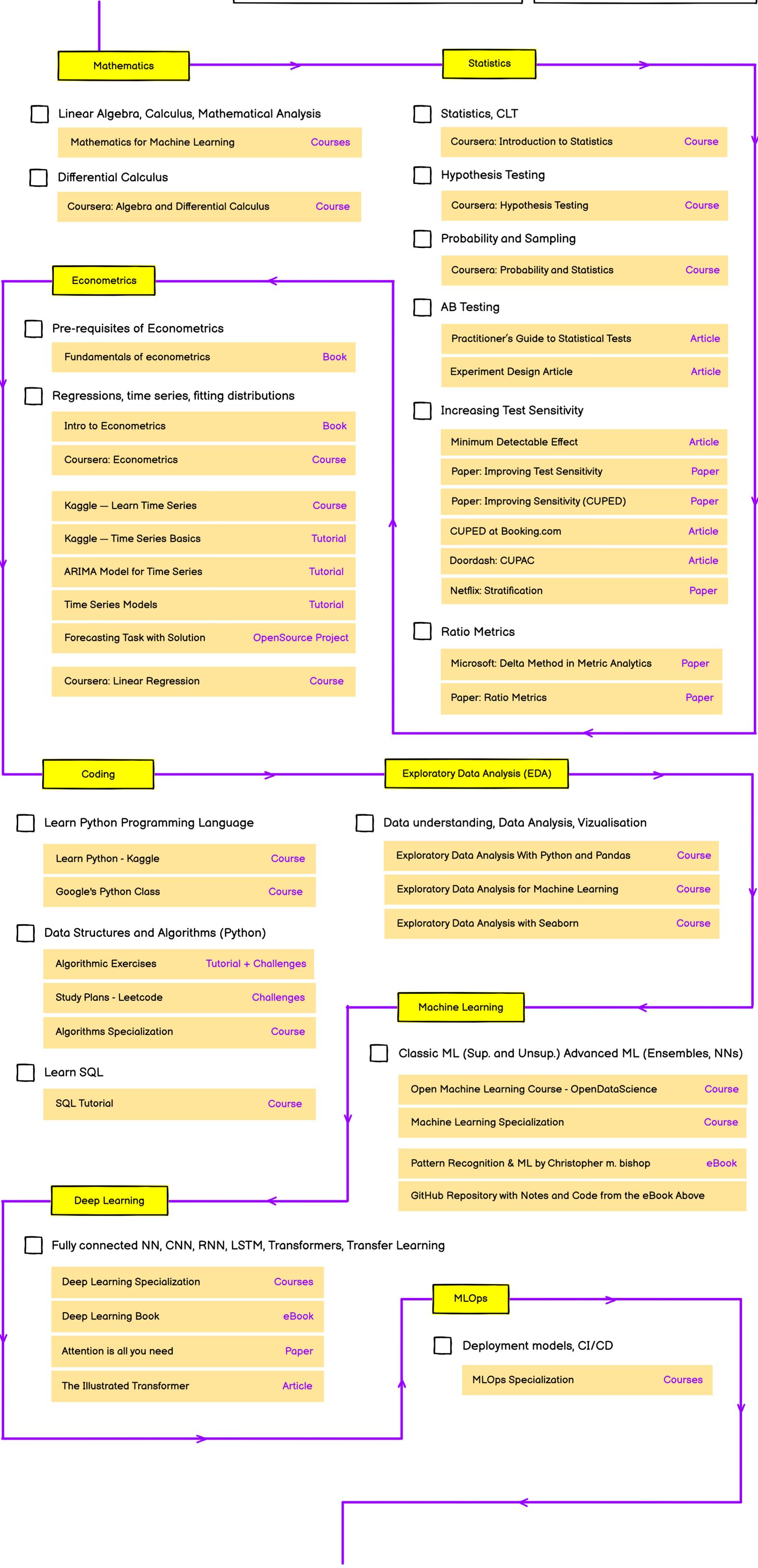


AI and Data Scientist

This roadmap was created by the AI and DS team at Careem (an Uber company). Shout out to the creators @mohamadtweets and @BulatShkanov

Find the detailed version of this roadmap along with resources and other roadmaps <https://roadmap.sh>



Mathematics

- Linear Algebra, Calculus, Mathematical Analysis
 - Mathematics for Machine Learning [Courses](#)
- Differential Calculus
 - Coursera: Algebra and Differential Calculus [Course](#)

Statistics

- Statistics, CLT
 - Coursera: Introduction to Statistics [Course](#)
- Hypothesis Testing
 - Coursera: Hypothesis Testing [Course](#)
- Probability and Sampling
 - Coursera: Probability and Statistics [Course](#)
- AB Testing
 - Practitioner's Guide to Statistical Tests [Article](#)
 - Experiment Design Article [Article](#)
- Increasing Test Sensitivity
 - Minimum Detectable Effect [Article](#)
 - Paper: Improving Test Sensitivity [Paper](#)
 - Paper: Improving Sensitivity (CUPED) [Paper](#)
 - CUPED at Booking.com [Article](#)
 - Doordash: CUPAC [Article](#)
 - Netflix: Stratification [Paper](#)
- Ratio Metrics
 - Microsoft: Delta Method in Metric Analytics [Paper](#)
 - Paper: Ratio Metrics [Paper](#)

Econometrics

- Pre-requisites of Econometrics
 - Fundamentals of econometrics [Book](#)
- Regressions, time series, fitting distributions
 - Intro to Econometrics [Book](#)
 - Coursera: Econometrics [Course](#)
 - Kaggle – Learn Time Series [Course](#)
 - Kaggle – Time Series Basics [Tutorial](#)
 - ARIMA Model for Time Series [Tutorial](#)
 - Time Series Models [Tutorial](#)
 - Forecasting Task with Solution [OpenSource Project](#)
 - Coursera: Linear Regression [Course](#)

Coding

- Learn Python Programming Language
 - Learn Python - Kaggle [Course](#)
 - Google's Python Class [Course](#)
- Data Structures and Algorithms (Python)
 - Algorithmic Exercises [Tutorial + Challenges](#)
 - Study Plans - Leetcode [Challenges](#)
 - Algorithms Specialization [Course](#)
- Learn SQL
 - SQL Tutorial [Course](#)

Exploratory Data Analysis (EDA)

- Data understanding, Data Analysis, Vizualisation
 - Exploratory Data Analysis With Python and Pandas [Course](#)
 - Exploratory Data Analysis for Machine Learning [Course](#)
 - Exploratory Data Analysis with Seaborn [Course](#)

Machine Learning

- Classic ML (Sup. and Unsup.) Advanced ML (Ensembles, NNs)
 - Open Machine Learning Course - OpenDataScience [Course](#)
 - Machine Learning Specialization [Course](#)
 - Pattern Recognition & ML by Christopher m. bishop [eBook](#)
 - GitHub Repository with Notes and Code from the eBook Above

Deep Learning

- Fully connected NN, CNN, RNN, LSTM, Transformers, Transfer Learning
 - Deep Learning Specialization [Courses](#)
 - Deep Learning Book [eBook](#)
 - Attention is all you need [Paper](#)
 - The Illustrated Transformer [Article](#)

MLOps

- Deployment models, CI/CD
 - MLOps Specialization [Courses](#)

Keep Learning