



@reiseuhu

# DCA0305

## Machine Learning Based Systems Design

ivanovitch.silva@ufrn.br  
@ivanovitchm

# A Long Pathway

## Vector & Matrices

Matrices & Vector Arithmetics  
Types, Operations  
Factorization

## Calculus

Derivatives

@ivanovitchm/imd0033\_2019\_1

## Exploratory Data Analysis

Measurements of Centrality (mean, mode, median, variance, std, z-score)

## Data Pipeline

Collect, clean, preparation, model, analysis, interpretation, viz  
Deploy, monitoring solution

@ivanovitchm/ppgeecmachinelearning2020.2

Linear Algebra & Math

Probability & Statistics

Data Science

Machine Learning

Deep Learning

## Probability

Conditional Probability  
Distributions  
Bayesian Probability

## Statistics

Data Viz, Central Limit Theorem  
Hypothesis Tests, Correlation  
Resampling Methods

@ivanovitchm/datascience2020.6

## Supervised Learning

KNN, Linear regression, Logistic  
Regression, Decision Tree,  
Random Forest, Ensemble,  
XGBoost, MLP

## Unsupervised Learning

K-Means, PCA

Fundamentals of Deep Learning  
Better Generalization vs Better  
Learning  
Hyperparameter tuning  
Batch normalization  
Convolutional Neural Networks  
Transfer Learning

# My first ML model in production



- ML DevOps
- Introduction to Data Science
- Fundamentals of ML
- Clean Code Principles
- Building Reproducible Model Workflow
- Deploy a Scalable ML Pipeline in Production
- ML Model Scoring and Monitoring

Unit #01 <Data Science Review>

Unit #02 <ML Fundamentals>

Unit #03 <MLOps>



Amazon  
SageMaker



TensorFlow Extended



main

1 branch

0 tags

Go to file

Add file

Code

ivanovitchm week 02 commit 6ca6994 31 minutes ago 9 commits

.gitignore	first commit	1 hour ago
LICENSE	Initial commit	1 hour ago
README.md	week 02 commit	31 minutes ago

README.md



## About



Repository for DCA0305, an undergraduate course about Machine Learning Workflows and Pipelines

Readme

GPL-3.0 License

## Releases

No releases published

[Create a new release](#)

## Packages