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coursework

machine learning
Support vector machine
Lidge,Lasso,Elastic Net
Dimensionality reduction
Geometric deep learning

stat/math
Probability
Statistics
Matrix optimization
Linear algebra
Info theory
Real analysis
Functional analysis
Wavelet and harmonic analysis
Stochastic calculus
Time series theory
Lie group and Lie algebra
Bayesian methods
Symplectic methods
Algebraic geometry
Riemannian geometry

languages
Python
Tensorflow(GPU)
Matlab
R

experience

geodesic convolution neural network | personal implementing
- 3D deep learning using intristic property of 3d data(geodesic) using modified cnn
- Siamese Loss function, Fast Matching Method, Geodesic and exponential map, Spectral decriptor,Geodesic context filter are used

deep learning on lie groups for skeleton-base | implementing and imporved(to be)
summer 2019
- Deep learning for matrix data with lie group structure to learn moving object.
- Will develop ReLU and FC layer for lie-group that will be largely reduce error.
- Lie group and Lie algebra, Matrix Optimazation, SO(3) anlaysis, Unsupervised Neural Learning on Lie groups are used.

codes of machine learning from scratch in coursework | coding from scratch
spring 2019
- PCA coding without free machine learnig package
- Lidge/Lasso/Elastic Net coding without free machine learning package
- EM algorithms coding without free machine learnig package(to be)
- SVM coding without free machine learnig package(to be)

studying natrual language processing(not core skills) | internship(to be) but can be cancled
summer 2019
- Transformer/Universal Transformer
- Learning grammar and algorithms
- RNN, LSTM, Attention(self etc)