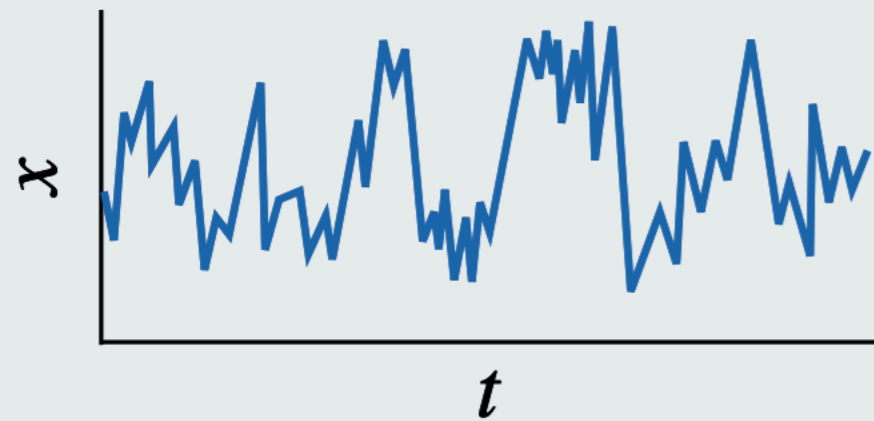


Input

*Uniformly sampled timeseries data,
with known sampling interval.*

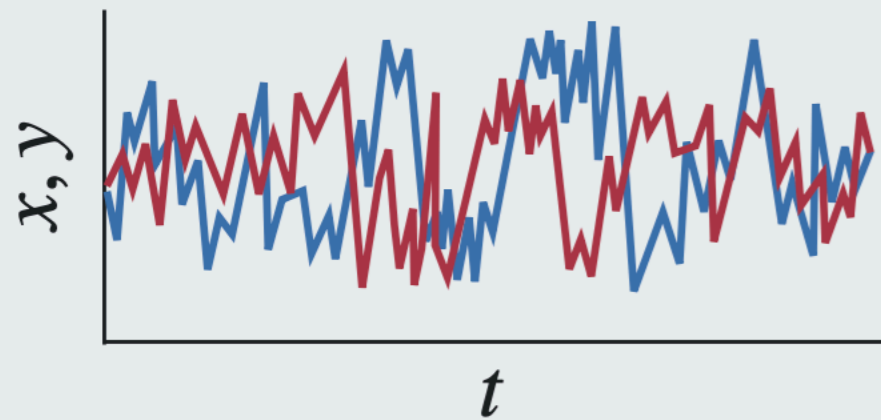
1D

Timeseries x ; sampling interval t
`dd = pydaddy.Characterize(x, t)`



2D

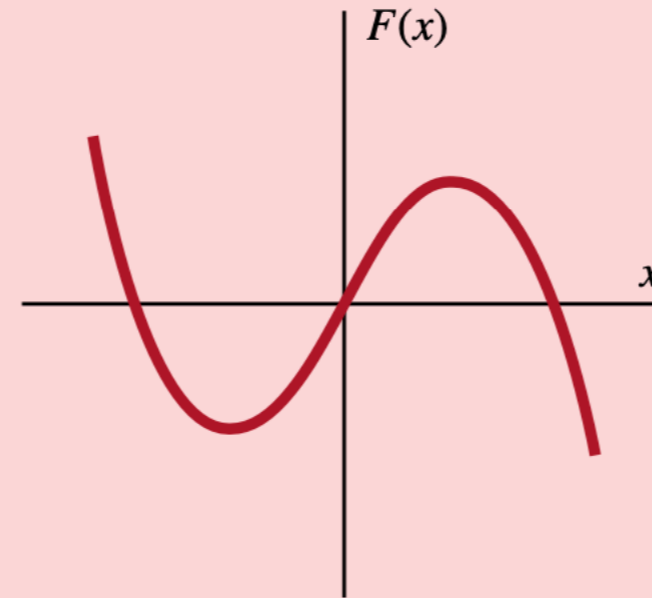
Timeseries x , y ; sampling interval t
`dd = pydaddy.Characterize([x, y], t)`



Analysis

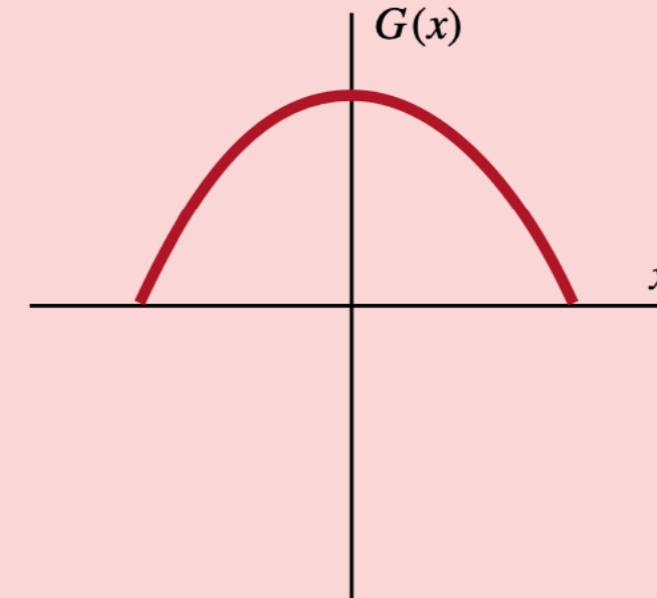
`dd.drift()`

Plot the estimated
drift function



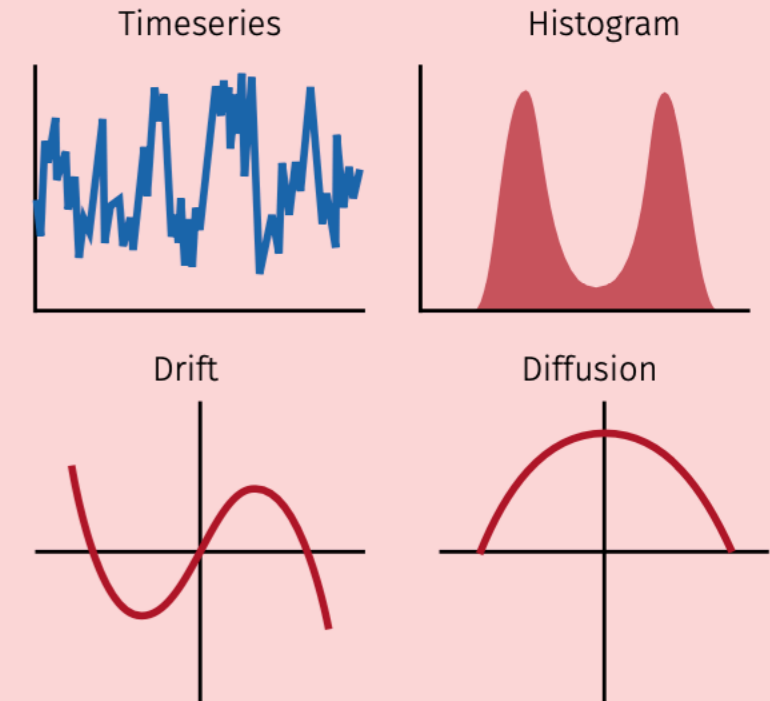
`dd.diffusion()`

Plot the estimated
diffusion function



`dd.summary()`

Show summary details and plots



Fitting

`dd.fit()`

Function fitting for drift
and diffusion functions.

- Specify maximum polynomial degree, sparsification threshold, regularization, etc.
- Fit with custom libraries

Diagnostics

`dd.noise_diagnostics()`

- Noise autocorrelation
- Deviation of residuals from Gaussian
- Pawula Theorem (higher moments)

`dd.model_diagnostics()`

Check for model self-consistency.

`dd.histogram()`

`dd.autocorrelation()`

Plot the histogram/
correlation functions

Data Export

`dd.export_data()`

Export data into a DataFrame
or a CSV file.