QuantNet 2.0

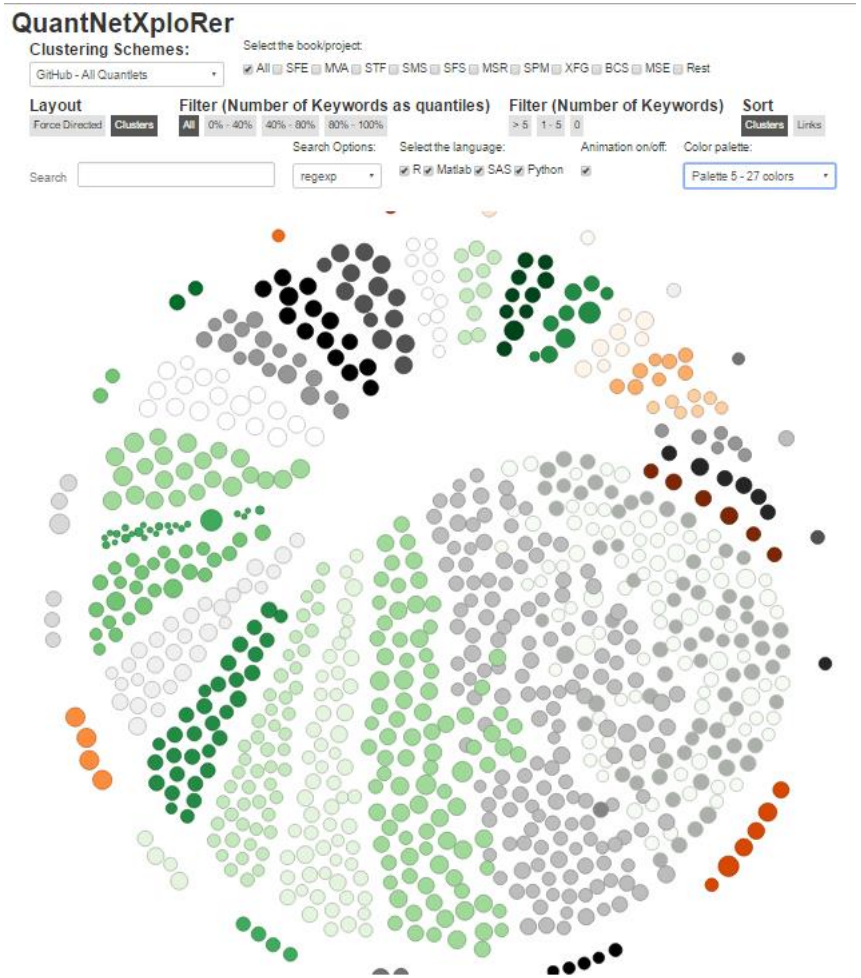
How to format and upload your Quantlet to QuantNet 2.0

Outline

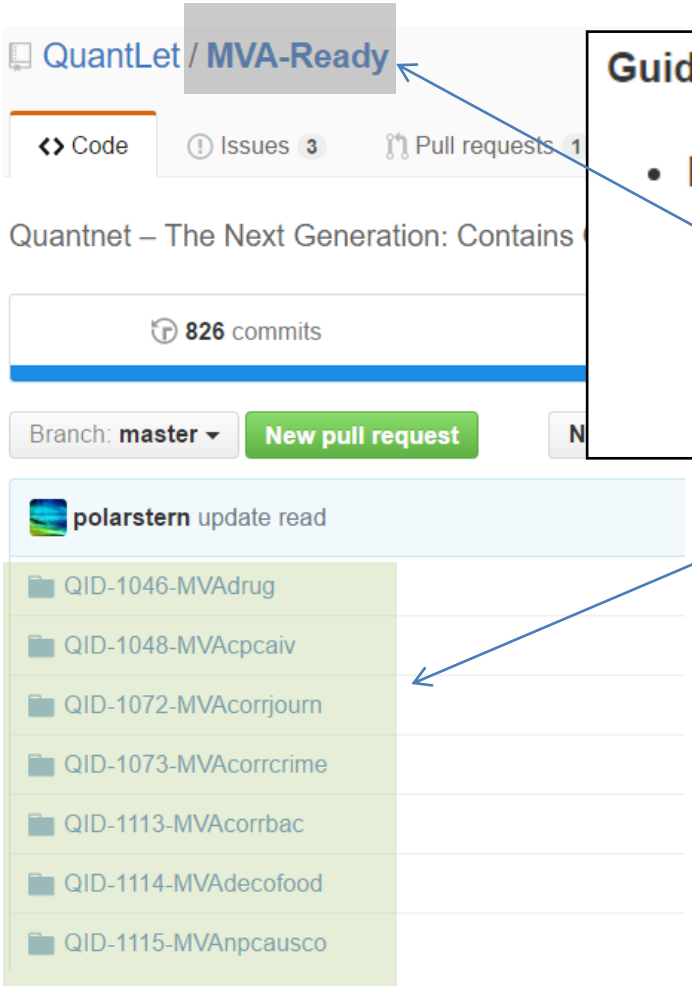
- QuantNet 2.0
- Quantlets
  - File Structure
  - Files
    - Metainfo.txt
    - Quantlet_name.r
- Quantlet Upload
- Live-Demo
- Tutorial

QuantNet 2.0

- QuantNet 2.0 is a scientific database of statistical software stored and maintained on Github
- QuantNetXplorer is a search engine
  - Keyword search
  - Filtering of results
  - Clustering of results
  - Vizualization



Quantlets – Folder Structure

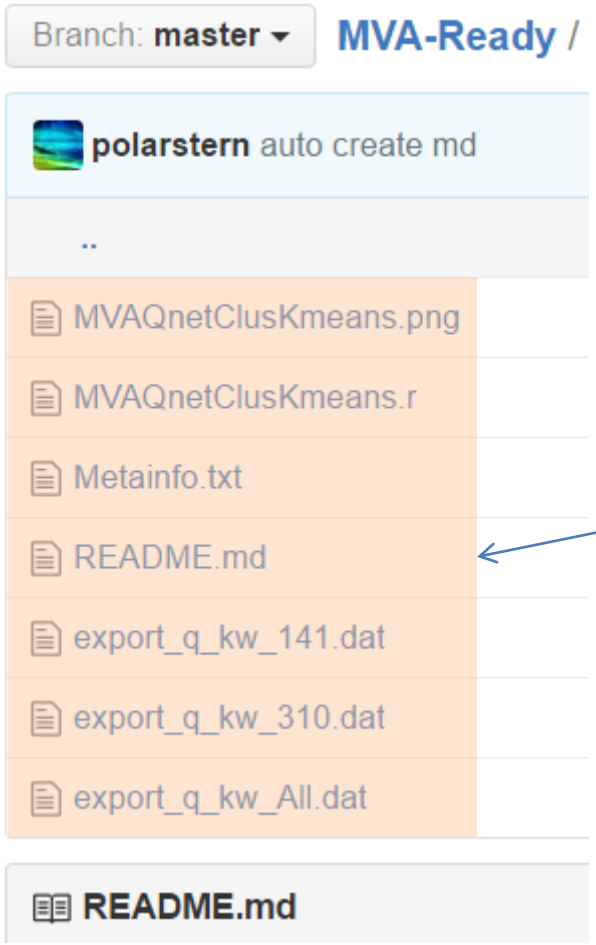


Guideline II:

- Every Q has to be in its own subfolder in the repository.
  - Reponame/Qfolder1/files of Q1
  - Reponame/Qfolder2/files of Q2
  - Reponame/Qfolder3/files of Q3

Go to Styleguide

Quantlets – Files



Guideline II:

- Every Q has to be in its own subfolder in the repository.
  - Reponame/Qfolder1/files of Q1
  - Reponame/Qfolder2/files of Q2
  - Reponame/Qfolder3/files of Q3

Quantlets consist of:
- Metainfo.txt
- Quantlet_Name.r

Additions:
- Input-Datasets (if used)
- Output-Files (if produced)

Quantlets - Files

Naming Conventions (1/3)		
R	**Matlab**	**SAS**
Code		
Quantletname.r	Quantletname.m	Quantletname.sas
Pictures		
Quantletname1.png	Quantletname1.png	Quantletname1.png
Quantletname2.png	Quantletname2.png	Quantletname2.png
Input-Files (Datasets) are named as used in the Quantlet code		

Quantlets - Files

Naming Conventions (2/3)		
R	**Matlab**	**SAS**
Code		
Quantletname.r	Quantletname.m	Quantletname.sas
Pictures		
Quantletname_1.png	Quantletname_1_m.png	Quantletname_1_sas.png
Quantletname_2.png	Quantletname_2_m.png	Quantletname_2_sas.png
…	…	…
Input-Files (Datasets) are named as used in the Quantlet code		

Quantlets - Files

Naming Conventions (also accepted) (3/3)		
R	**Matlab**	**SAS**
Code		
Quantletname.r	Quantletname.m	Quantletname.sas
Pictures		
Quantletname-1.png	Quantletname-1_m.png	Quantletname-1_sas.png
Quantletname-2.png	Quantletname-2_m.png	Quantletname-2_sas.png
…	…	…
Input-Files (Datasets) are named as used in the Quantlet code		

Quantlets - Files

Branch: **master** ▾ **ADM** / **HermPolyPlot** /

This branch is 6 commits ahead, 1 commit behind SHIccc:master.

 **lborke** finish md

..

HermPolyPlot.m	new
HermPolyPlot.png	new
Metainfo.txt	Update Metainfo.txt
README.md	finish md

README.md

Quantlets – Metainfo.txt

```
Name of QuantLet : MVAprofil

Published in : Applied Multivariate Statistical Analysis

Description : Plots an example of population files.

Keywords : profile, test, hypothesis-testing, population, plot, graphical represe

See also : SMSprofil, SMSprofplasma

Author : Zografia Anastasiadou

Author[SAS] : Svetlana Bykovskaya

Submitted : Tue, January 11 2011 by Zografia Anastasiadou

Submitted[SAS] : Tue, April 5 2016 by Svetlana Bykovskaya
```

Quantlets – Quantlet_name.r

```r
# clear variables and close windows
rm(list = ls(all = TRUE))
graphics.off()

# parameter settings
set.seed(1)     # pseudo random numbers
n = 100         # number of observations
k = 3           # number of trajectories
p = 0.6         # probability of positive step being realis

# Main computation
t       = c(0:n)
trend   = t * (2 * p - 1)
std     = sqrt(4 * t * p * (1 - p))
s_1     = trend + 2 * std  # upper confidence band
s_2     = trend - 2 * std  # lower confidence band
z       = matrix(runif(k * n, min = (p - 1), max = p), k, n
z       = (z > 0) * 1
z       = z * 2 - 1
walk    = matrix(0, k, n, byrow = TRUE)
```

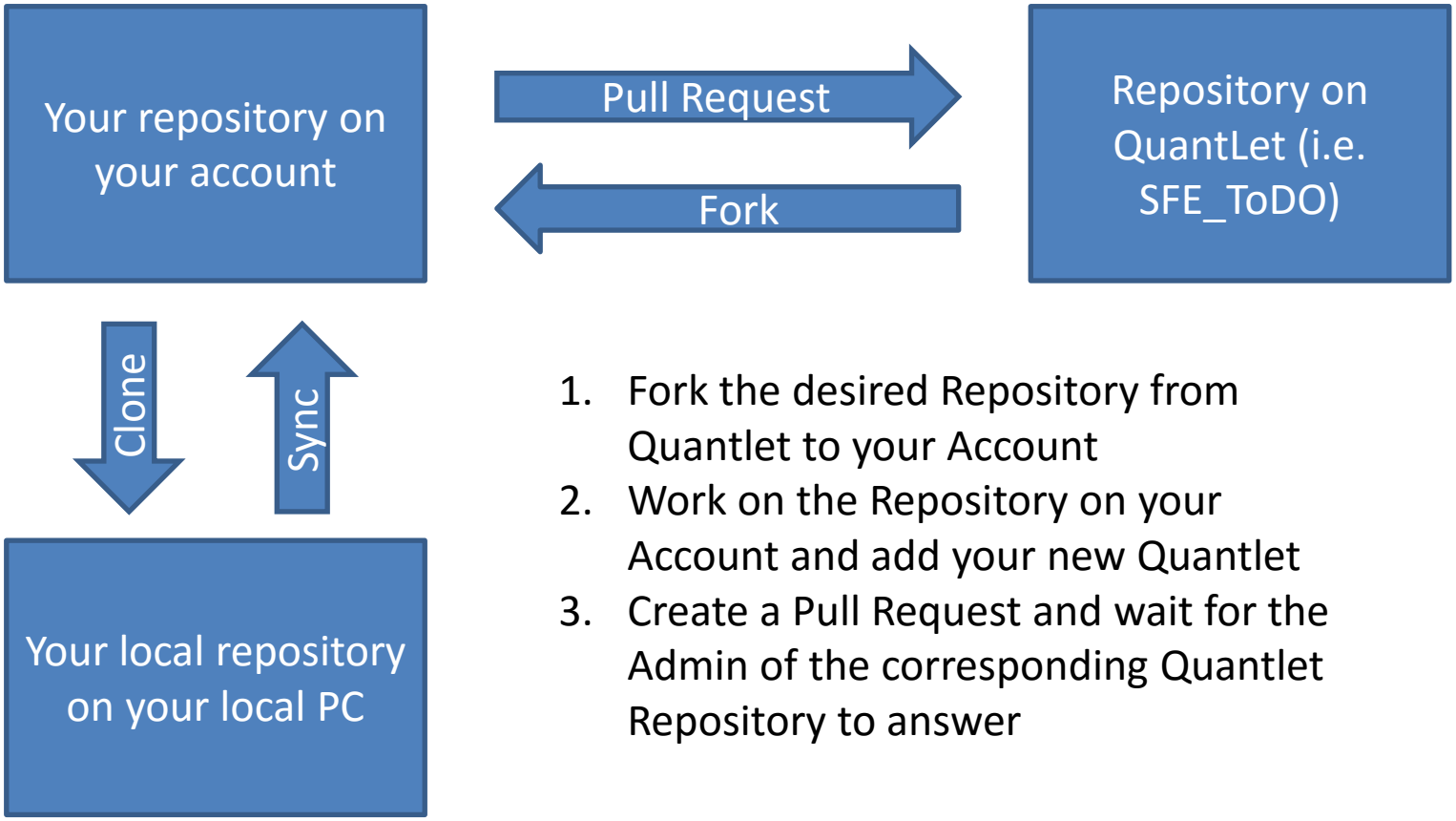
- Change all <- with =
- Align all subsequent variable definitions
- Set four space characters for indentation
  - Use FormatR in R

Quantlets – Quantlet_name.r

```
% clearing work&preparing
clc
clear
close all

% parameter setting
 M     = 500;                % number of simulations
 C     = 1;                  % choose the different DGP
 ng    = 5;                  % number of initial grid point
 nreg  = 3;                  % number of regressors(including
 gamma = 0.25;               % probability level
 TT    = [200 400 800];      % time intervals
 RASE  = zeros(M, nreg);
 RASE0 = zeros(2*length(TT), nreg);

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
function[a, b] = mydgp(T, C)           % sub-functions for dat

% matrix setting
Y    = zeros(T + 102, 1);
Y(2) = 1;

% generate initial value of Y
if C == 1                                % Example 1
    for t = 1 : (T + 100)
        uu       = Y(t + 1);
        a1       = 0.138 + (0.316 + 0.982*uu)*exp(-3.89*uu^2);
        a2       = -0.437 - (0.659 + 0.126*uu)*exp(-3.89*uu^2);
        eps      = normrnd(0, 0.2);
        Y(t + 2) = Y(t + 1)*a1 + Y(t)*a2 + 2*a1*Y(t + 1)*eps*(uu >= 0);
```

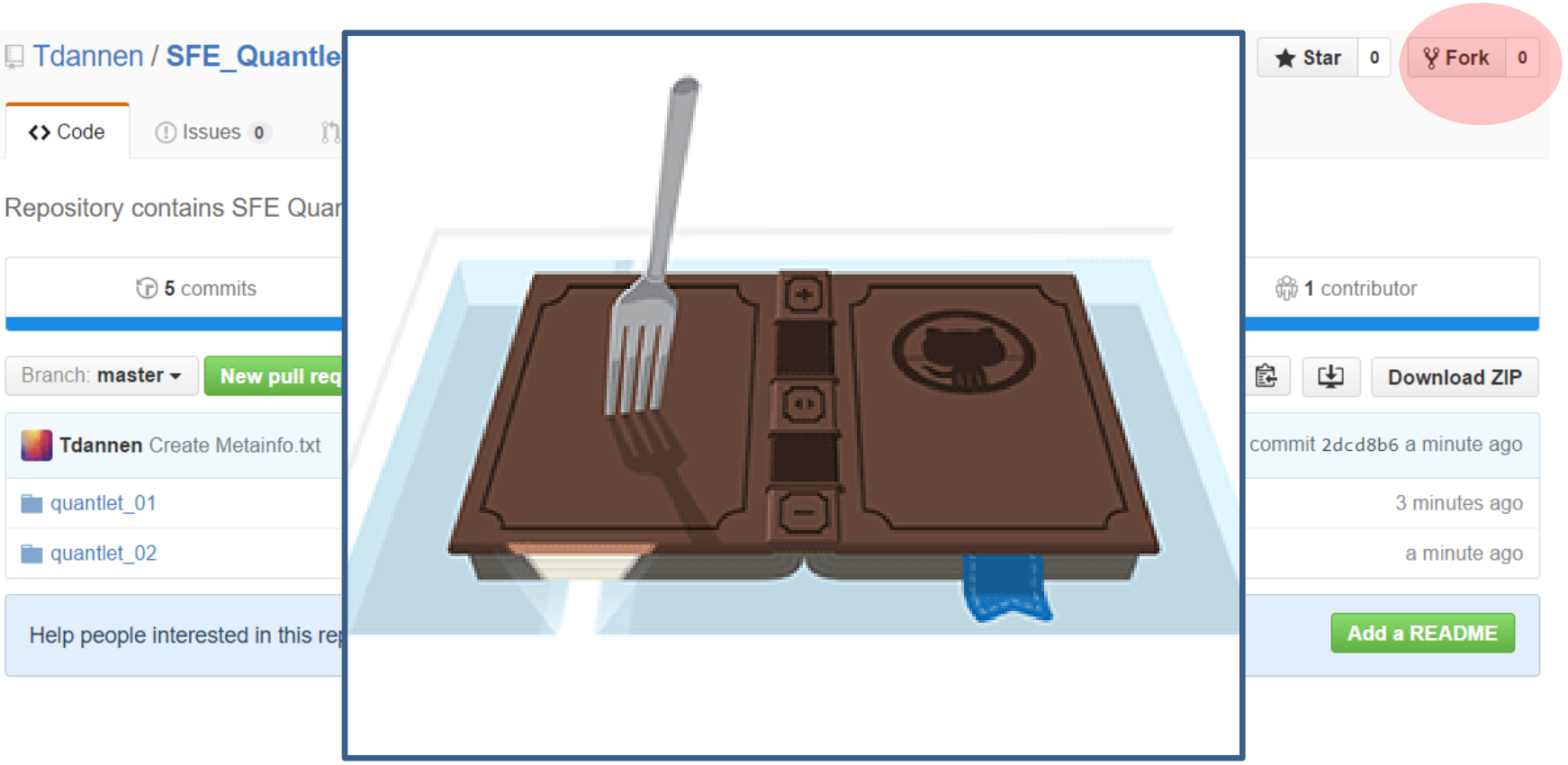
- Change all <- with =
- Align all subsequent variable definitions
- Set four space characters for indentation

Github - Workflow



1. Fork the desired Repository from Quantlet to your Account
2. Work on the Repository on your Account and add your new Quantlet
3. Create a Pull Request and wait for the Admin of the corresponding Quantlet Repository to answer

Github - Workflow



Live-Demo

- This demo will show you:
  - How to fork a repository to your account
  - How to add your Quantlet to that repository
    - Which files you need to upload for completeness
    - How to format those files
  - How to create a pull request

Tutorial

- In this Tutorial you will
  - Fork a repository to your account
  - Add your Quantlet to that repository
    - Upload your files and check for completeness
    - Format those files correctly
  - Create a pull request