


# FANS - Agenda

- **How to create simulated data (distributions)**
  - Generate data sets with specific distributions
  - Generate variables with dependencies in data
  - Generate time series datasets


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```
data _null_;  
  var_1 = rannor( round( time() ) );  
  put var_1= ;  
run;
```

```
data CASUSER.CUSTOMER_DATA;
  do i = 1 to 15000;
    Customer_age = 50 + 10 * rannor(12345);
    Customer_gender = ranbin(12345, 1, .40);
    N_of_Transactions = round( 5 * ranexp(12345) );
    Value_of_Transactions = abs( 150 * N_of_Transactions + 25 ** 2 * rannor(12345) );
    Customer_XSell_Index =
      5
      + 0.25 * Customer_age
      + 0.15 * Customer_gender
      + 0.45 * N_of_Transactions
      + 5 * rannor(12345);
    Customer_XSell_Flg = ((Customer_XSell_Index + 15 * rannor(12345)) gt 25);
  output;
end;
run;
```




```
/* Exploring Data */  
proc univariate data=CASUSER.CUSTOMER_DATA;  
  ods select Histogram;  
  var N_of_Transactions;  
  histogram N_of_Transactions / midpoints = 0 to 25 by 1;  
run;
```





```
data CASUSER.TIME_SERIES_DATA;
  do date = "01Jan2019"d to "01jan2021"d;
    X = 100 + 25 * rannor(12345);
    Var_X = 125 + 15 * rannor(123456);
    Y = X + 0.5 * lag( X ) - 0.35 * lag7( X ) + 0.66 * lag(Var_X);
  output;
  end;
  format date ddmmyy10.;
run;
```





[sas.com](https://sas.com)

