#### Random

#### meanVector

DCGMatrix columnWiseSource

-(DCGVector \*) apply

## covariantMatrix

DCGMatrix columnWiseSource DCGVector mean

-(DCGMatrix\*) apply

## kurtosis

DCGMatrix \*columnWiseVariableSource NSNumber \*bins

-(DCGMatrix \*) apply

## skewedness

DCGMatrix \*columnWiseVariableSource

NSNumber \*bins

-(DCGMatrix \*) apply

~ use bin histogram to determine probability

## randomVectorSample

dcgMatrix \*columnWiseVariableSource;
dcgMatrix \*randomSubset;

-(void) apply;

## jointDensity

DCGMatrix \*columnWiseVariableSource NSNumber \*bins

-(DCGVector \*) apply

# marginalDensities

DCGMatrix \*columnWiseVariableSource

**NSNumber \*bins** 

-(DCGMatrix \*) apply

# deWhitening

DCGMatrix source

-(DCGMatrix) apply

## Whitening

DCGMatrix source

-(DCGMatrix) apply

## **Dot Product Expectation**

dcgMatrix \*sourceColumnWise;

dcgVector \*weights;

NSNumber \*weightedMean;

@private

dcgMatrix \*sourceWeightedCW;

-(void) apply