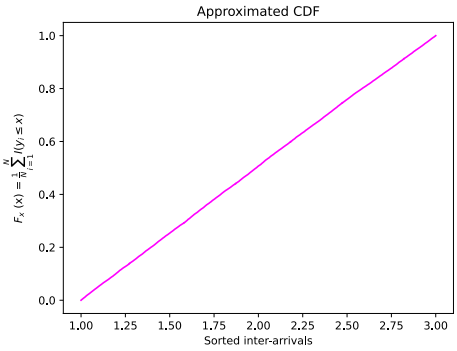
Workloads Types

To have this assignment evaluated for the in-class exam, please upload on WeBeep a ZIP file including:

- the source code used to solve this assignment
- this file, with the table below properly filled

Name (Family + given)						Demasi Giovanni
Student ID (codice persona)						10656704
QR-code ID (8 digits of the QR that was given you)						71847928
Data1.txt	1st Moment					1,9904
	2nd Moment					4,2934
	3rd Moment					9,8705
	4th Moment					23,8131
	5th Moment					59,5526
	2nd Central Moment [Variance]					0,3319
	3rd Central Moment					0,0039
	4th Central Moment					0,1998
	5th Central Moment					0,0056
	3rd Standardized Moment [Skewness]					0,0203
	4th Standardized Moment					1,8139
	5th Standardized Moment					0,0877
	Standard deviation					0,5761
	Coefficient of variation					0,2894
	Kurtosis					-1,1861
	10%	25%	50%	75%	90%	Percentile ←
	1,1962	1,4928	1,9878	2,4821	2,7948	
	Lag *m=1*		Lag *m=2*		Lag *m=3*	Cross-covariance ←
	0,0006		0,0019		-0,0031	
	Lag *m=1*		Lag *m=2*		Lag *m=3*	Pearson corr. Coeff. ←
	0,0019		0,0057		-0,0093	
	CDF from samples: 					

Data2.txt

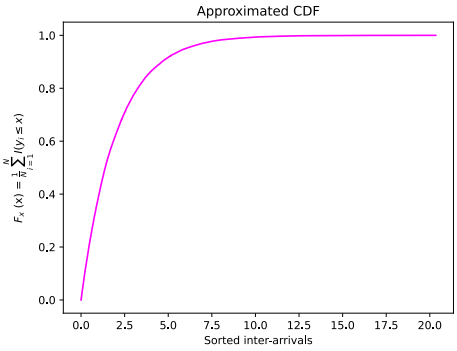
1st Moment	2,0130
2nd Moment	8,0563
3rd Moment	48,1474
4th Moment	383,1290
5th Moment	3801,4381
2nd Central Moment [Variance]	4,0042
3rd Central Moment	15,8092
4th Central Moment	142,0615
5th Central Moment	1371,3267
3rd Standardized Moment [Skewness]	1,9730
4th Standardized Moment	8,8601
5th Standardized Moment	42,7408
Standard deviation	2,0011
Coefficient of variation	0,9941
Kurtosis	5,8601

10%	25%	50%	75%	90%	Percentile ←
0,2107	0,5820	1,3847	2,8120	4,6369	

Lag *m=1*	Lag *m=2*	Lag *m=3*	Cross-covariance ←
0,0048	0,0103	-0,0424	

Lag *m=1*	Lag *m=2*	Lag *m=3*	Pearson corr. Coeff. ←
0,0012	0,0026	-0,0106	

CDF from samples:



Data3.txt

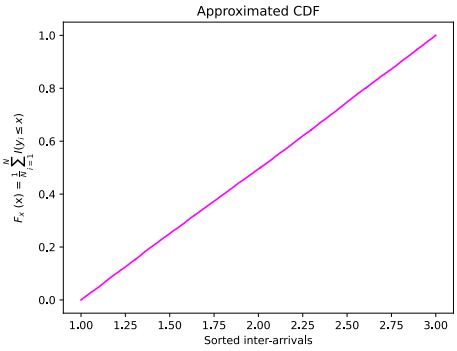
1st Moment	2,0040
2nd Moment	4,3516
3rd Moment	10,0632
4th Moment	24,3964
5th Moment	61,2459
2nd Central Moment [Variance]	0,3357
3rd Central Moment	-0,0026
4th Central Moment	0,2017
5th Central Moment	-0,0030
3rd Standardized Moment [Skewness]	-0,0135
4th Standardized Moment	1,7898
5th Standardized Moment	-0,0464
Standard deviation	0,5794
Coefficient of variation	0,2891
Kurtosis	-1,2102

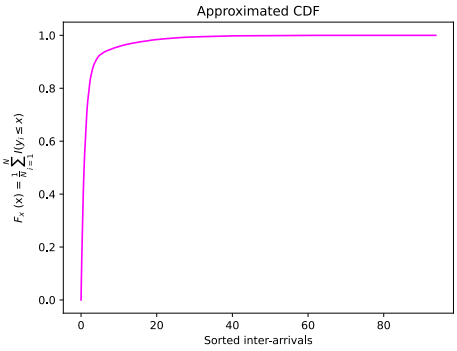
10%	25%	50%	75%	90%	Percentile
1,1982	1,4992	2,0111	2,5032	2,8027	←

Lag *m=1*	Lag *m=2*	Lag *m=3*	Cross-covariance
0,2646	0,2103	0,1673	←

Lag *m=1*	Lag *m=2*	Lag *m=3*	Pearson corr. Coeff.
0,7883	0,6264	0,4984	←

CDF from samples:



<table>
<tr><td rowspan="19">Data4.txt</td><td colspan="5">1st Moment</td><td>2,0329</td></tr>
<tr><td colspan="5">2nd Moment</td><td>24,6241</td></tr>
<tr><td colspan="5">3rd Moment</td><td>671,7377</td></tr>
<tr><td colspan="5">4th Moment</td><td>25310,0539</td></tr>
<tr><td colspan="5">5th Moment</td><td>1187192,4665</td></tr>
<tr><td colspan="5">2nd Central Moment [Variance]</td><td>20,4912</td></tr>
<tr><td colspan="5">3rd Central Moment</td><td>538,3628</td></tr>
<tr><td colspan="5">4th Central Moment</td><td>20406,9915</td></tr>
<tr><td colspan="5">5th Central Moment</td><td>955754,4333</td></tr>
<tr><td colspan="5">3rd Standardized Moment [Skewness]</td><td>5,8039</td></tr>
<tr><td colspan="5">4th Standardized Moment</td><td>48,6007</td></tr>
<tr><td colspan="5">5th Standardized Moment</td><td>502,8349</td></tr>
<tr><td colspan="5">Standard deviation</td><td>4,5267</td></tr>
<tr><td colspan="5">Coefficient of variation</td><td>2,2267</td></tr>
<tr><td colspan="5">Kurtosis</td><td>45,6007</td></tr>
<tr><td>10%</td><td>25%</td><td>50%</td><td>75%</td><td>90%</td><td rowspan="2">Percentile ←</td></tr>
<tr><td>0,1151</td><td>0,3284</td><td>0,8066</td><td>1,7568</td><td>3,7362</td></tr>
<tr><td colspan="2">Lag m=1</td><td colspan="2">Lag m=2</td><td>Lag m=3</td><td rowspan="2">Cross-covariance ←</td></tr>
<tr><td colspan="2">-0,0133</td><td colspan="2">0,0294</td><td>-0,1073</td></tr>
<tr><td colspan="2">Lag m=1</td><td colspan="2">Lag m=2</td><td>Lag m=3</td><td rowspan="2">Pearson corr. Coeff. ←</td></tr>
<tr><td colspan="2">-0,007</td><td colspan="2">0,0014</td><td>-0,0052</td></tr>
<tr><td colspan="6">CDF from samples:
 
</td></tr>
</table>

Clarification about units of measure

Given that *x* is the unit of measure of the input samples, the unit of measure of standard deviation and percentile is the same of the input samples, so *x*. Cross covariance is characterized by a unit of measure given by the product of the samples unit of measure, so x^2.

Instead, the unit of measure of the n^{th} moment and the n^{th} central moment is x^n.

Standardized moments, coefficient of variation, Kurtosis and Pearson correlation coefficients are dimensionless numbers.