

Installing & Running Auditmetrics

If you obtained Auditmetrics AI from the Microsoft Store, it will be automatically loaded on the “Start Menu” on a Windows 10/11 operating systems. If you are using an older legacy Windows contact:

support@auditmetrics.com.

The software’s compact efficient algorithms and data structures are designed to be loaded on desktops and notepads. If you are on a company server it is best to contact IT.

Auditmetrics Pro 7 has conducted audits of accounts involving over six million records. That is the realm of large businesses with data stored on servers. Such business environments will have tech support that can be called upon in setting up an Auditmetrics readable dataset.

This discussion is for those small business and students whose available business accounting tools are primarily popular accounting packages such as QuickBooks and Excel. We should be clear about the formal definition of “small business”. Depending on the particular industry a small business is a company that has 500 or less employees. A vast majority are already on servers. This discussion is for truly small business with possibly ten or less employees.

We do offer a free version of the Small Business 6.5. It is the goal of Auditmetrics founder to target educators, students and truly small businesses with 10 or less employees. He has always felt these groups usually fall between the cracks when it comes to advancing their interests. For the free version go to AuditmetricAI.com for download.

[Quick Start Video Overview](#)

Step 1: Practice Data:

Before downloading the practice data, create a working folder such as **AuditPractice**. Get practice audit data by downloading and save it in your AuditPractice folder:

https://auditmetricsai.com/FileLibrary/Test_Population.xlsx

Let’s take a look at the Practice data to be sampled:

Transaction_ID	VENDOR_NUMBER	amount	absamt	TxDate	ACCOUNT	DataSet	ZipCode	CustomerID
12646	676	\$5.00	\$5.00	3/1/2023	5705	Acme Inc.	20134	16760
12078	676	(\$5.00)	\$5.00	7/1/2022	5705	Acme Inc.	20134	16760
20075	2195	\$5.00	\$5.00	6/1/2023	6245	Acme Inc.	20135	31950
13469	2996	\$5.00	\$5.00	12/1/2023	5705	Acme Inc.	20134	39960
23975	2783	\$5.00	\$5.00	10/1/2023	6820	Acme Inc.	20134	37830
4883	586	\$5.00	\$5.00	8/1/2022	5060	Acme Inc.	20134	15860
12301	2998	\$5.00	\$5.00	11/1/2022	5705	Acme Inc.	20134	39980
10774	3101	\$5.00	\$5.00	4/1/2022	5530	Acme Inc.	20136	41010
23195	2736	\$5.00	\$5.00	2/1/2022	6630	Acme Inc.	20134	37360
7962	3833	\$5.00	\$5.00	11/1/2023	5060	Acme Inc.	20135	48330
23208	2736	(\$5.00)	\$5.00	3/1/2022	6630	Acme Inc.	20136	37360
6276	3833	\$5.00	\$5.00	4/1/2023	5060	Acme Inc.	20134	48330

Please take note of the first row of the account data fields. Some are in red which are fields required by the Auditmetrics parser. If they are not present you will receive an error message. Don't worry about them for now. Our goal is to go through the process of selecting a random sample which will be used to conduct an audit. Right now, the AuditPractice folder has only the excel file. Though Excel is very user friendly it is not an effective and efficient dataset. Your first step is to convert Excel to a tab delimited text file. This is the format Auditmetrics is expecting. Efficient processing was an interesting discussion when Auditmetrics upgraded from Auditmetrics V5 to Auditmetrics V6.

File name:

Save as type:

Step 2: Let's Get Started

Now call up AuditmetricsAI.com home page:

Detail	<input type="text"/>
No. Strata	<input type="text" value="6"/>
Precision (Margin of Error)	<input type="text" value=".03"/>
Efficiency	<input type="text"/>
Total Sample	<input type="text"/>

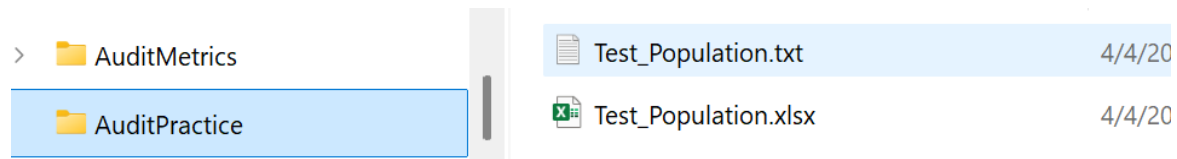
Potential Detail Cutoffs ←

- Sample Size Excel File
←-- this template documents sample design
- Sample Validation Excel File
←-- this template is to document sample validity

1. Sample Size Calculations

The first step is to read in Test_Population.txt file.
Auditmetrics will review the dataset and suggest what is called a detailed stratum. This stratum represents large volume account entries. It keeps large dollar amount out of sampling statistical uncertainty.

When you select detail cutoff you then go to the AuditPractice folder:



This is the Auditmetrics suggested detail stratum using the default of 6 strata that we rounded up to \$1,600 which means all transactions \$1,600 are selected for the stratum:

Detail	<input type="text" value="1600"/>	Computer Suggested Initial Detail Cutoff: \$ 1560 Interquartile Range \$ 18 - \$ 192
No. Strata	<input type="text" value="6"/>	
Precision (Margin of Error)	<input type="text" value=".03"/>	
Efficiency	<input type="text"/>	

Precision or margin of error is what determines sample size. A precision of 3% is the gold standard which would require the largest sample size. Sample size represents time and cost. If you want a smaller sample just to get a preliminary look at the account you can use a range of precision from 3% to 10%. This is such an important concept please refer to [Auditmetrics Primer](#) and [Springer text](#) to review this concept.

Step 3: What is the design of the stratified dataset including sample size requirement:

You should notice the blank Efficiency box. Statistical efficiency is a another very important concept in statistical analysis. It is axiomatic that a stratified random sample is more efficient than sampling from the total unstratified account.

For Help: Info@auditmetrics.com

<p>Detail <input type="text" value="1600"/></p> <p>No. Strata <input type="text" value="5"/></p> <p>Precision <i>(Margin of Error)</i> <input type="text" value=".03"/></p> <p>Efficiency <input type="text" value="0.71"/></p> <p>Total Sample <input type="text" value="1153"/></p> <p><input type="button" value="Potential Detail Cutoffs"/></p> <p><input type="radio"/> Sample Size Excel File</p> <p><input type="radio"/> Sample Validation Excel File</p> <p><input type="button" value="1. Sample Size Calculations"/></p>	<p>0 -49.99 50-174.99 175-399.99 400-824.99 825-1600 > 1600</p>
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Sample Specs:					
Freq.	Mean	Std Dev.	Total Acct.	Sample	
10101	19.02	14.15	192150	67	
5776	91.67	43.38	529492	123	
2813	258.69	95.3	727690	138	
1614	548.66	185.14	885532	161	
893	1108.68	409.74	990051	206	
458	1869.44	633.62	856205	458	

You will notice that we changed the number of strata from 6 to 5 which created a more compact stratified sample without significantly affecting Efficiency. As you become confident in working with Auditmetrics you will find that there is a certain amount of flexibility in the inputs. A target for efficiency is around .60 or greater. If not, there are solutions not appropriate for this discussion but the references cited above can provide guidance.

If you are now satisfied with the stratification and efficiency of the account, now select the following button to generate the Excel template that will document the approved stratification calculation results.

Sample Size Excel File

Sample Validation Excel File

Step 4: Generate the Sample

This is a two-step process. First select the random sample command that is displayed above and Auditmetrics will go through a series of validation procedures to assure the selected sample is not a statistical outlier that will give imprecise results

Sample Size Excel File

Sample Validation Excel File

1. Sample Size Calculations

2. Select Random Sample

Sample Size Excel File

Sample Validation Excel File

1. Sample Size Calculations

3. Sample Validation

Auditmetrics command 3 goes through a series of statistical validation calculations. If one or more fails the next step is to select another sample until all validation tests are passed.

The following exhibit indicates that all tests have been passed:

Population:

N	Mean	Total \$
10101	19.02	192150.03
5776	91.67	529492.47
2813	258.69	727690.32
1614	548.66	885532.28
893	1108.68	990051.43
458	1869.44	856205.07

Sample Summary:

Validation Tests Listed Below

n	Mean	SD.	Total \$		
67	19.03	12.77	1275	ok	ok
123	91.09	37.78	11204	ok	ok
138	248.38	103.46	34277	ok	ok
161	558.59	143.8	89934	ok	ok
206	1106.4	412.6	227918	ok	ok
458	1869.44	633.62	856205		

Validation #1- Observed precision under 0.03 no need to resample

Validation #2- Strata specific test passed.

Potential Detail Cutoffs

- Sample Size Excel File
- Sample Validation Excel File

1. Sample Size Calculations

To finish the process and with this button, the validated sample below is generated.

Sample size = 1,153



	A	B	C	D	E	F	G	H	I	J
	Transaction_ID	VENDOR_NUMBER	amount	absamt	TxDate	ACCOUNT	DataSet	ZipCode	Customer ID	Strata
1										
2	22131	680	\$5.00	\$5.00	1/1/2024	6245	Acme Inc.	20136	16800	1
3	7498	555	\$5.38	\$5.38	8/1/2023	5060	Acme Inc.	20137	15550	1
4	8974	555	\$5.81	\$5.81	2/1/2024	5060	Acme Inc.	20134	15550	1
5	4607	555	\$5.86	\$5.86	7/1/2022	5060	Acme Inc.	20136	15550	1
6	15371	2085	\$6.50	\$6.50	6/1/2024	5835	Acme Inc.	20135	30850	1
7	7092	570	\$6.55	\$6.55	7/1/2023	5060	Acme Inc.	20134	15700	1
8	13603	412	\$6.60	\$6.60	12/1/2023	5705	Acme Inc.	20137	14120	1
9	9332	1916	\$6.96	\$6.96	3/1/2024	5060	Acme Inc.	20136	29160	1
10	22101	680	\$7.56	\$7.56	1/1/2024	6245	Acme Inc.	20136	16800	1
11	15264	2130	\$7.68	\$7.68	1/1/2024	5835	Acme Inc.	20136	31300	1
12	9632	506	\$8.14	\$8.14	4/1/2024	5060	Acme Inc.	20136	15060	1
13	20470	412	\$8.75	\$8.75	7/1/2023	6245	Acme Inc.	20136	14120	1
14	3010	555	\$8.98	\$8.98	4/1/2024	5050	Acme Inc.	20134	15550	1





Also generated is the Excel template that can be used to record audit results:

	A	B	D	E	F	G	H	I	J	K	L	M	N	
1	Acme Inc.													
2		Population			Sample				Audit Results			Strata Validity Test		
3	Strata	Pop. Mean	Pop.Total Value	Pop. Freq.	Sample Mean	Sample Std. Dev.	Sample Total Value	Sample Size	Amount Error	Error Ratio	Pop. Est. Error Amt.	Lower Bound	Upper Bound	
4														
5	0-49.99	\$19.02	\$192,150	10,101	\$19.03	\$12.77	\$1,275	67	\$25.50	0.020	\$3,843.00	15.97	\$22.09	pass
6	50-174.99	\$91.67	\$529,492	5,776	\$91.09	\$37.78	\$11,204	123	\$336.13	0.030	\$15,884.77	84.42	\$97.77	pass
7	175-399.99	\$258.69	\$727,690	2,813	\$248.38	\$103.46	\$34,277	138	\$856.93	0.025	\$18,192.26	231.12	\$265.65	pass
8	400-824.99	\$548.66	\$885,532	1,614	\$558.59	\$143.80	\$89,934	161	\$3,597.35	0.040	\$35,421.29	536.38	\$580.81	pass
9	825-1600	\$1,108.68	\$990,051	893	\$1,106.40	\$412.60	\$227,918	206	\$6,837.55	0.030	\$29,701.54	1,050.06	\$1,162.74	pass
10	> 1600	\$1,869.44	\$856,205	458	\$1,869.44	\$633.62	\$856,205	458	\$23,973.74	0.028	\$23,973.74			
11	Total (Excluding Detail)		\$3,324,917				\$364,608	695	↑					
12	Total (Including Detail)		\$4,181,122				\$1,220,814	1,153						
13														
14	Error (Excluding Detail)			Std. Error(\$)	\$21856				This is where the Auditors enters audit results	Sample Ad	0.031			
15	Error (Including Detail)									Overall Rat	0.030			
16				-1 Std. Error	\$81,187									
17			Sample Error:	Mid-Point	\$103,043		Detail Error:	\$23,974						
18				+1 Std. Error	\$124,899									

This Auditmetrics AI template has all calculations fully displayed which are either Excel functions or direct calculations. It is a valuable learning resource in understanding the underlying statistical process in estimating total dollar value that failed the audit.

Step 5: AuditPractice folder contents

	1. ExcelTemplate2. xlsx	excel template audit results
	2. ExcelTemplate 1.xlsx	excel template documenting sample

	3. SampleData.csv	random sample csv text file
	4. SampleData.txt	random sample tab delim text file
	5. Test_population.txt	account to be audited tab delim text file
	6. Test_Population.xlsx	account to be audited excel file

- We started with Excel file (6) that was derived from the account to be audited. The techniques for small business to create this type of file is discussed in the Springer book. Pay attention to pages 49-51 Appendix (page 111). Also For those who want to upgrade their relational data base skills (RDB), this Appendix's discussion of Microsoft Access is a good start. The Excel file (6) is converted to a tab-delimited text file (5) which enhances analytic efficiency.
- The next files (4 & 3) are two generated random sample text files. File 4 is a tab delimited text file. If there are regular monitoring audits, this file can be added to previous audits to build a file that can be eventually used for forecasting, as long as the same precision is used. File 3 is another text file but you notice it has the Excel tag. If you examine it using a plain text reader like notepad you will see a text file with variables separated by a comma. If you just click on the file, it will be read in by excel as a spreadsheet. This will give the capabilities of Excel.
- Files (2 & 1) are the software generated Excel template previously discussed that document the random sample and to record the sample results.

! Please Pay Attention to these Issues:

- 1. For some implementations of Windows there may be a long delay in generating an Excel template. The best approach for efficient operation is to open Excel first and leave it open in the background by minimizing it. Then open Auditmetrics.**
- 2. The small business learning version 6 is ideal for short term cashflow monitoring, short-term IRS tax credit deductions and customer feedback. This involves short term quarterly or monthly data.**
- 3. Multiyear forecasting requires the large volume capability of AI Pro 7 that can handle millions of transactions.**
- 4. Auditmetrics AI Pro 7 includes forensic accounting features and AI generated regression forecasts while the small business version only AI automates the process of selecting the random sample for the statistical audit.**
- 5. Analysis section formulas of the AI generated Excel templates are protected. If you want to access all Excel cells to cut and paste or do other editing then select “Review” at the top menu and then select “Unprotect Sheet”.**

The next step is to create an Auditmetrics dataset of your own

[2_GettingStarted.pdf](#)