Advanced Techniques for Working With Big Data in JMP

Visualization, Analysis, Data Preparation, and More

Julian L. Parris, Ph.D.
JMP Learning Strategy Manager
SAS Institute Inc.

jmp® Statistical Discovery.™ From SAS.

Today

- The challenge of big data
- Methods for working with big data in JMP
- JiEL – JMP in Everyday Life

Defining Big Data

Volume
- Number of records (tall)
- Number of variables (wide)

Velocity
- Frequency of Update (up to real time)
- Frequency of Analysis

Variety
- Expanded Types of Data
- Character, Numeric, Free Text,
- Audio, Video, Genomic

Veracity
- Data Quality
- Accuracy (data), Validity (method)

Limitations

Processing speed

Memory

Your Time

Your Patience

Big Data Methods in JMP

Complete Data

- Tall Data
  - Virtual joins
- Wide Data (Big Statistics)
  - Data Filtering/Switching
  - Predictor/Response Screening
  - Data table graphs
  - Dimension reduction
  - Automated variable selection

Proxy Methods (Sampling)

- The case for subsets
- Modeling with subsets
- Data preparation with subsets
  - Missing value pattern
  - Outlier screening
  - Formula columns

Tall and Wide Data

(In Memory)

World Development Indicators

16.51 GB ~305 million data points 1402 variables

World Indicators Full Join.jmp

Data Filter Tabulate Graph Builder Distribution Fit Y by X Fit Model Recode

World Indicators...
Source

Columns (54/1)
CountryName
CountryCode
IndicatorName
IndicatorCode
Year
Value
Topic
ShortDefinition
LongDefinition
UnitOfMeasure
Periodicity
BasePeriod
OtherNotes
Aggrega...Method
Limitatio...ceptions
NotesFr...alSource
GeneralComments
Source
Statistic...hodology
Develop...elevance
RelatedSourceLinks
OtherWebLinks
RelatedIndicators
LicenseType
ShortName
TableName
LongName
Alpha2Code
CurrencyUnit
SpecialNotes
Region
IncomeGroup
Wb2Code
National...BaseYear
National...enceYear
SnaPriceValuation
LendingCategory
OtherGroups
System...lAccounts
Alternati...onFactor
PppSurveyYear
Balance...ualInUse
External...ingStatus
SystemOfTrade
Govern...gConcept
ImfData...Standard
LatestPo...nCensus
LatestH...oldSurvey
SourceO...tureData
VitalReg...omplete
LatestA...ralCensus
LatestIn...strialData
LatestTradeData
LatestW...awalData

Rows
All rows 5,656,458
Selected 1
Excluded 0
Hidden 0
Labelled 0

	CountryName	CountryCode	IndicatorName	IndicatorCode	Year	Value	Topic	ShortD...	LongDefinition	Un i...	Periodicity	Bas e...	OtherNotes	AggregationMethod	LimitationsAndExcepti...
2406655	El Salvador	SLV	Manufacturing,...	NV.IND.MANF....	1994	1771700000	Economic Policy & Debt...		Manufacturin...		Annual			Gap-filled ...	In establish...
2406656	El Salvador	SLV	Marine protect...	ER.MRN.PTMR...	1994	3.1004136734	Environment: Biodiversi...		Marine prote...		Annual			Weighted ...	The data s...
2406657	El Salvador	SLV	Maternal mort...	SH.STA.MMRT	1994	135	Health: Reproductive he...		Maternal mor...		Annual			Weighted ...	The metho...
2406658	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	1249000000	Private Sector & Trade: ...		Merchandise ...		Annual			Gap-filled ...	Exports are...
2406659	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	1249118000	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Sum	
2406660	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	4.2961513644	Private Sector & Trade: ...		Merchandise ...		Annual			Weighted ...	
2406661	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	30.31835263	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Weighted ...	
2406662	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	0	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Weighted ...	
2406663	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	0.0004803389	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Weighted ...	
2406664	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	30.31835263	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Weighted ...	Data on ex...
2406665	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	0	Private Sector & Trade: ...		Merchandise ...		Annual			Weighted ...	
2406666	El Salvador	SLV	Merchandise e...	TX.VAL.MRCH....	1994	65.385496006	Private Sector & Trade: ...	M...	Merchandise ...		Annual			Weighted ...	Data on ex...
2406667	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	2547000000	Private Sector & Trade: I...		Merchandise i...		Annual			Gap-filled ...	The value ...
2406668	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	2574171000	Private Sector & Trade: I...		Merchandise i...		Annual			Sum	
2406669	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	7.9125668031	Private Sector & Trade: I...		Merchandise i...		Annual			Weighted ...	
2406670	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	22.077437746	Private Sector & Trade: I...	M...	Merchandise i...		Annual			Weighted ...	
2406671	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	0.009750712	Private Sector & Trade: I...	M...	Merchandise i...		Annual			Weighted ...	
2406672	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	0.0289413563	Private Sector & Trade: I...	M...	Merchandise i...		Annual			Weighted ...	
2406673	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	22.077437746	Private Sector & Trade: I...	M...	Merchandise i...		Annual			Weighted ...	Data on ex...
2406674	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	0.009750712	Private Sector & Trade: ...		Merchandise i...		Annual			Weighted ...	
2406675	El Salvador	SLV	Merchandise i...	TM.VAL.MRCH....	1994	70.009995451	Private Sector & Trade: I...	M...	Merchandise i...		Annual			Weighted ...	Data on ex...
2406676	El Salvador	SLV	Merchandise tr...	TG.VAL.TOTL....	1994	46.947660038	Private Sector & Trade: ...		Merchandise ...		Annual			Weighted ...	
2406677	El Salvador	SLV	Military expen...	MS.MIL.XPND....	1994	1.9664588899	Public Sector: Defense ...		Military expe...		Annual			Weighted ...	Data on mi...
2406678	El Salvador	SLV	Military expen...	MS.MIL.XPND....	1994	159000000	Public Sector: Defense ...		Military expe...		Annual				
2406679	El Salvador	SLV	Mineral rents (...	NY.GDP.MINR....	1994	0	Environment: Natural re...		Mineral rents ...		Annual			Weighted ...	This definit...
2406680	El Salvador	SLV	Mobile cellular ...	IT.CEL.SETS	1994	4868	Infrastructure: Communi...		Mobile cellul...		Annual			Sum	Operators ...
2406681	El Salvador	SLV	Mobile cellular ...	IT.CEL.SETS.P2	1994	0.0857382942	Infrastructure: Communi...		Mobile cellul...		Annual			Weighted ...	Operators ...
2406682	El Salvador	SLV	Mortality rate, ...	SP.DYN.AMRT.FE	1994	145.466	Health: Mortality		Adult mortalit...		Annual			Weighted ...	Complete ...
2406683	El Salvador	SLV	Mortality rate, ...	SP.DYN.AMRT....	1994	316.675	Health: Mortality		Adult mortalit...		Annual			Weighted ...	Complete ...
2406684	El Salvador	SLV	Mortality rate, i...	SP.DYN.IMRT.IN	1994	37.6	Health: Mortality		Infant mortali...		Annual			Weighted ...	Complete ...
2406685	El Salvador	SLV	Mortality rate, ...	SH.DYN.NMRT	1994	19.3	Health: Mortality		Neonatal mor...		Annual			Weighted ...	Complete ...
2406686	El Salvador	SLV	Mortality rate, ...	SH.DYN.MORT	1994	47.4	Health: Mortality		Under-five m...		Annual			Weighted ...	Complete ...
2406687	El Salvador	SLV	Multilateral de...	DT.DOD.MLAT....	1994	61.5469	Economic Policy & Debt...		Multilateral d...		Annual			Weighted ...	
2406688	El Salvador	SLV	Multilateral de...	DT.TDS.MLAT....	1994	50.770788793	Economic Policy & Debt...	M...	Multilateral d...		Annual			Weighted ...	
2406689	El Salvador	SLV	Multilateral de...	DT.TDS.MLAT.CD	1994	171456000	Economic Policy & Debt...		Public and pu...		Annual			Sum	
2406690	El Salvador	SLV	Natural gas ren...	NY.GDP.NGAS....	1994	0	Environment: Natural re...		Natural gas r...		Annual			Weighted ...	This definit...
2406691	El Salvador	SLV	Net barter ter...	TT.PRI.MRCH.X...	1994	97.647058824	Private Sector & Trade: ...		Net barter ter...		Annual	2...			Collecting ...
2406692	El Salvador	SLV	Net bilateral ai...	DC.DAC.AUSL....	1994	210000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406693	El Salvador	SLV	Net bilateral ai...	DC.DAC.AUTL....	1994	2260000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406694	El Salvador	SLV	Net bilateral ai...	DC.DAC.BELL....	1994	1670000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406695	El Salvador	SLV	Net bilateral ai...	DC.DAC.CANL....	1994	1020000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406696	El Salvador	SLV	Net bilateral ai...	DC.DAC.DNKL....	1994	2290000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406697	El Salvador	SLV	Net bilateral ai...	DC.DAC.CECL....	1994	24820000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406698	El Salvador	SLV	Net bilateral ai...	DC.DAC.FINL....	1994	-30000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406699	El Salvador	SLV	Net bilateral ai...	DC.DAC.FRAL....	1994	1720000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406700	El Salvador	SLV	Net bilateral ai...	DC.DAC.DEUL....	1994	29620000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406701	El Salvador	SLV	Net bilateral ai...	DC.DAC.IRLL.CD	1994	200000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406702	El Salvador	SLV	Net bilateral ai...	DC.DAC.ITAL.CD	1994	4660000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406703	El Salvador	SLV	Net bilateral ai...	DC.DAC.JPNL....	1994	21000000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406704	El Salvador	SLV	Net bilateral ai...	DC.DAC.KORL....	1994	170000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406705	El Salvador	SLV	Net bilateral ai...	DC.DAC.LUXL....	1994	1800000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406706	El Salvador	SLV	Net bilateral ai...	DC.DAC.NLDL....	1994	7710000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406707	El Salvador	SLV	Net bilateral ai...	DC.DAC.NZLL....	1994	20000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406708	El Salvador	SLV	Net bilateral ai...	DC.DAC.NORL....	1994	2030000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406709	El Salvador	SLV	Net bilateral ai...	DC.DAC.PRTL....	1994	10000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406710	El Salvador	SLV	Net bilateral ai...	DC.DAC.ESPL....	1994	4910000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406711	El Salvador	SLV	Net bilateral ai...	DC.DAC.SWEL....	1994	5340000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406712	El Salvador	SLV	Net bilateral ai...	DC.DAC.CHEL....	1994	8070000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406713	El Salvador	SLV	Net bilateral ai...	DC.DAC.TOTL....	1994	261980000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406714	El Salvador	SLV	Net bilateral ai...	DC.DAC.GBRL....	1994	480000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406715	El Salvador	SLV	Net bilateral ai...	DC.DAC.USAL....	1994	142000000	Economic Policy & Debt...		Net bilateral ...		Annual			Sum	Data exclu...
2406716	El Salvador	SLV	Net change in i...	DT.IXA.DPPG....	1994	-4314000	Economic Policy & Debt...		Net change i...		Annual			Sum	
2406717	El Salvador	SLV	Net current tra...	NY.TRF.NCTR.CN	1994	1243600000	Economic Policy & Debt...		Current transf...		Annual				
2406718	El Salvador	SLV	Net current tra...	NY.TRF.NCTR.CD	1994	1243600000	Economic Policy & Debt...		Current transf...		Annual				
2406719	El Salvador	SLV	Net financial fl...	DT.NFL.BLAT.CD	1994	-50367000	Economic Policy & Debt...		Bilateral debt...		Annual			Sum	
2406720	El Salvador	SLV	Net financial fl...	DT.NFL.MIBR.CD	1994	51795000	Economic Policy & Debt...		Net financial f...		Annual			Sum	Although s...
2406721	El Salvador	SLV	Net financial fl...	DT.NFL.MIDA....	1994	-600000	Economic Policy & Debt...		Net financial f...		Annual			Sum	In exceptio...
2406722	El Salvador	SLV	Net financial fl...	DT.NFL.IMFC.CD	1994	0	Economic Policy & Debt...		Net financial f...		Annual			Sum	The IMF's l...
2406723	El Salvador	SLV	Net financial fl...	DT.NFL.IMFN.CD	1994	0	Economic Policy & Debt...		Net financial f...		Annual			Sum	The IMF's l...
2406724	El Salvador	SLV	Net financial fl...	DT.NFL.MLAT.CD	1994	154893000	Economic Policy & Debt...		Public and pu...		Annual			Sum	
2406725	El Salvador	SLV	Net financial fl...	DT.NFL.MOTH....	1994	48307000	Economic Policy & Debt...		Net financial f...		Annual			Sum	
2406726	El Salvador	SLV	Net financial fl...	DT.NFL.RDBC....	1994	32623000	Economic Policy & Debt...		Net financial f...		Annual			Sum	
2406727	El Salvador	SLV	Net financial fl...	DT.NFL.RDBN....	1994	22768000	Economic Policy & Debt...		Net financial f...		Annual			Sum	
2406728	El Salvador	SLV	Net flows on e...	DT.NFL.DLXF.CD	1994	44661000	Economic Policy & Debt...		Net flows (or ...		Annual			Sum	
2406729	El Salvador	SLV	Net flows on e...	DT.NFL.DPNG....	1994	0	Economic Policy & Debt...		Private nongu...		Annual			Sum	
2406730	El Salvador	SLV	Net flows on e...	DT.NFL.DPPG....	1994	44661000	Economic Policy & Debt...		Public and pu...		Annual			Sum	
2406731	El Salvador	SLV	Net flows on e...	DT.NFL.DSTC....	1994	83360000	Economic Policy & Debt...		Net flows (or ...		Annual			Sum	
2406732	El Salvador	SLV	Net flows on e...	DT.NFL.DECT.CD	1994	128021000	Economic Policy & Debt...		Net flows on ...		Annual			Sum	
2406733	El Salvador	SLV	Net income fro...	NY.GSR.NFCY....	1994	-92000000	Economic Policy & Debt...		Net income i...		Annual				
2406734	El Salvador	SLV	Net income fro...	NY.GSR.NFCY....	1994	-92000000	Economic Policy & Debt...		Net income i...		Annual				
2406735	El Salvador	SLV	Net ODA recei...	DT.ODA.ODAT...	1994	3.8171013949	Economic Policy & Debt...	Ne...	Net official d...		Annual			Weighted ...	Data on O...
2406736	El Salvador	SLV	Net ODA recei...	DT.ODA.ODAT...	1994	19.163421681	Economic Policy & Debt...	Ne...	Net official d...		Annual			Weighted ...	Data on O...
2406737	El Salvador	SLV	Net ODA recei...	DT.ODA.ODAT...	1994	55.195249214	Economic Policy & Debt...	Ne...	Net official d...		Annual			Weighted ...	Data on O...
2406738	El Salvador	SLV	Net official dev...	DT.ODA.ALLD....	1994	432880000	Economic Policy & Debt...	Ne...	Net official d...		Annual			Sum	
2406739	El Salvador	SLV	Net official dev...	DT.ODA.ALLD....	1994	305120000	Economic Policy & Debt...	Ne...	Net official d...		Annual			Sum	
2406740	El Salvador	SLV	Net official dev...	DT.ODA.ODAT...	1994	432880000	Economic Policy & Debt...	Ne...	Net official d...		Annual			Sum	
2406741	El Salvador	SLV	Net official dev...	DT.ODA.ODAT...	1994	305120000	Economic Policy & Debt...	Ne...	Net official d...		Annual			Sum	Data on O...
2406742	El Salvador	SLV	Net official flo...	DT.NFL.IFAD.CD	1994	2360000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406743	El Salvador	SLV	Net official flo...	DT.NFL.UNDP....	1994	2360000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406744	El Salvador	SLV	Net official flo...	DT.NFL.UNFP.CD	1994	1050000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406745	El Salvador	SLV	Net official flo...	DT.NFL.UNCR....	1994	1570000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406746	El Salvador	SLV	Net official flo...	DT.NFL.UNCF....	1994	1540000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406747	El Salvador	SLV	Net official flo...	DT.NFL.UNTA....	1994	1110000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406748	El Salvador	SLV	Net official flo...	DT.NFL.WFPG....	1994	1320000	Economic Policy & Debt...	Ne...	Net official fl...		Annual			Sum	
2406749	El Salvador	SLV	Net secondary ...	BN.TRF.CURR....	1994	1288386080.5	Economic Policy & Debt...		Secondary in...		Annual				Discrepanc...
2406750	El Salvador	SLV	Net taxes on p...	NY.TAX.NIND....	1994	524300000	Economic Policy & Debt...		Net taxes on ...		Annual	v...			
2406751	El Salvador	SLV	Net taxes on p...	NY.TAX.NIND....	1994	540100000	Economic Policy & Debt...		Net taxes on ...		Annual				
2406752															

	NotesFromOri...	GeneralComm...	Source	StatisticalConceptAndMethodology	DevelopmentRelevance	Rel a...	Ot h...	Rel a...	LicenseType	ShortName	TableName	LongName	Alpha2Code	CurrencyUnit	SpecialNotes	Region
2406655		Note: ...	World Bank national accounts d...	The data on manufacturi...	Firms typically...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406656			United Nations Environmental P...	This indicator is calculat...	As threats to ...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406657	Estima...	Releva...	WHO, UNICEF, UNFPA, The W...	Reproductive health is a ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406658			World Trade Organization.	Merchandise trade data ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406659			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406660			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406661			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406662			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406663			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406664			World Bank staff estimates base...		The relative i...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406665			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406666			World Bank staff estimates base...		Developing e...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406667			World Trade Organization.	Merchandise trade data ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406668			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406669			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406670			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406671			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406672			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406673			World Bank staff estimates base...		The relative i...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406674			World Bank staff estimates base...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406675			World Bank staff estimates base...		Developing e...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406676			World Trade Organization, and ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406677		Data f...	Stockholm International Peace ...	SIPRI military expenditur...	Although nati...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406678		Data f...	Stockholm International Peace ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406679			Estimates based on sources an...	The estimates of natural ...	Accounting fo...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406680		Please ...	International Telecommunicatio...	Refers to the subscriptio...	The quality of ...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406681		Please ...	International Telecommunicatio...	Refers to the subscriptio...	The quality of ...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406682			(1) United Nations Population D...	The main sources of mor...	Mortality rates...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406683			(1) United Nations Population D...	The main sources of mor...	Mortality rates...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406684		Releva...	Estimates Developed by the U...	The main sources of mor...	Mortality rates...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406685			Estimates developed by the UN...	The main sources of mor...	Mortality rates...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406686		Releva...	Estimates Developed by the U...	The main sources of mor...	Mortality rates...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406687			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406688			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406689			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406690			Estimates based on sources an...	The estimates of natural ...	Accounting fo...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406691			United Nations Conference on ...	The terms of trade index...	Data on intern...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406692			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406693			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406694			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406695			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406696			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406697			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406698			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406699			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406700			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406701			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406702			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406703			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406704			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406705			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406706			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406707			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406708			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406709			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406710			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406711			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406712			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406713			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406714			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406715			Development Assistance Com...	The Development Assist...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406716			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406717			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406718			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406719			World Bank, International Debt ...	Data show concessional ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406720			World Bank, International Debt ...	The World Bank's Intern...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406721			World Bank, International Debt ...	World Bank concessiona...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406722			World Bank, International Debt ...	The International Monet...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406723			World Bank, International Debt ...	Nonconcessional lendin...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406724			World Bank, International Debt ...	Data show concessional ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406725			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406726			World Bank, International Debt ...	Regional development ...					Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406727			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406728			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406729			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406730			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406731			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406732			World Bank, International Debt ...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406733			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406734			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406735			Development Assistance Com...	The ODA excludes nonc...	The ratio of ai...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406736			Development Assistance Com...	Net official developmen...	The ratio of ai...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406737			Development Assistance Com...	Net official developmen...	The ratio of ai...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406738			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406739			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406740			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406741			Development Assistance Com...	The flows of official and ...	DAC exists to ...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406742			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406743			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406744			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406745			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406746			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406747			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406748			Development Assistance Com...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406749		Note: ...	International Monetary Fund, B...	The balance of payment...	The balance o...				Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406750			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...
2406751			World Bank national accounts d...						Open	El Salv...	El Salv...	Repub...	SV	U.S. d...		Latin A...

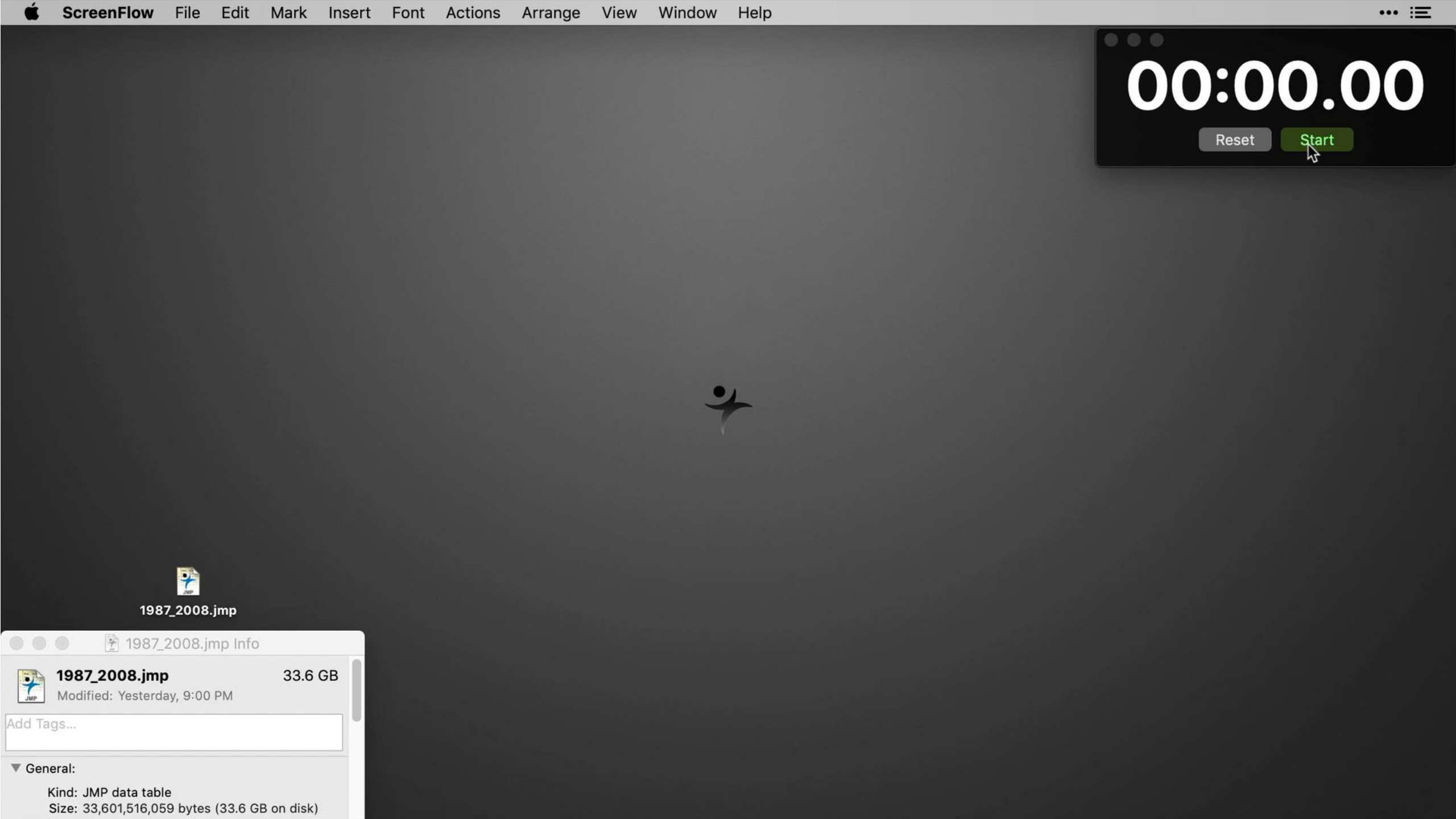
	IncomeGroup	Wb2Code	NationalAccounts...	NationalAccounts...	SnaPriceValuation	LendingCategory	Oth er...	Syst e...	Alt e...	Ppp S...	Bala nc...	Ext er...	Syst e...	Gov er...	Imf D...	Late st...	Late st...	Sou rc...	VitalR egis...	Late st...	Late stl...	Late st...	Late st...
2406655	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406656	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406657	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406658	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406659	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406660	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406661	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406662	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406663	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406664	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406665	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406666	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406667	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406668	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406669	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406670	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406671	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406672	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406673	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406674	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406675	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406676	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406677	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406678	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406679	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406680	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406681	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406682	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406683	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406684	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406685	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406686	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406687	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406688	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406689	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406690	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406691	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406692	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406693	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406694	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406695	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406696	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406697	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406698	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406699	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406700	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406701	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406702	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406703	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406704	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406705	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406706	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406707	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406708	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406709	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406710	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406711	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406712	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406713	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406714	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406715	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406716	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406717	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406718	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406719	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406720	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406721	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406722	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406723	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406724	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406725	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406726	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406727	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406728	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406729	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406730	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406731	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406732	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406733	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406734	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406735	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406736	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406737	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406738	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406739	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406740	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406741	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406742	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406743	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406744	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406745	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406746	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406747	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406748	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406749	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406750	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...
2406751	Lower ...	SV	1990		Value a...	IBRD		C...		2...	I...	A...	S...	C...	S...	2...	M...	In...	Yes	20...	•	20...	20...

Tall Data

via Proxy Methods

Airline Flight Data 1987-2008

33.60 GB ***3.58 billion data points***


ScreenFlow File Edit Mark Insert Font Actions Arrange View Window Help
00:00.00
Reset
Start
1987_2008.jmp
1987_2008.jmp Info
1987_2008.jmp
33.6 GB
Modified: Yesterday, 9:00 PM
Add Tags...
General:
Kind: JMP data table
Size: 33,601,516,059 bytes (33.6 GB on disk)

JMP File Edit Tables Rows Cols DOE Analyze Graph Tools Add-Ins View Window Help

1987_2008.jmp

Data Filter Tabulate Graph Builder Distribution Fit Y by X Fit Model Recode

00:00:00

Reset Start

1987_2008.jmp
- Source
- Files

Columns (29/0)
- Year
- Month
- DayofMonth
- DayOfWeek
- DepTime
- CRSDepTime
- ArrTime
- CRSArrTime
- UniqueCarrier
- FlightNum
- TailNum
- ActualElapsedTime
- CRSElapsedTime
- AirTime

Rows

All rows	123,534,969
Selected	0
Excluded	0
Hidden	0
Labelled	0

	Year	Month	DayofMonth	DayOfWeek	DepTime	CRSDepTime	ArrTime	CRSArrTime	UniqueCarrier	FlightNum	TailNum	e
1	1987	10	14	3	741	730	912	849	PS	1451	NA	91
2	1987	10	15	4	729	730	903	849	PS	1451	NA	94
3	1987	10	17	6	741	730	918	849	PS	1451	NA	97
4	1987	10	18	7	729	730	847	849	PS	1451	NA	78
5	1987	10	19	1	749	730	922	849	PS	1451	NA	93
6	1987	10	21	3	728	730	848	849	PS	1451	NA	80
7	1987	10	22	4	728	730	852	849	PS	1451	NA	84
8	1987	10	23	5	731	730	902	849	PS	1451	NA	91
9	1987	10	24	6	744	730	908	849	PS	1451	NA	84
10	1987	10	25	7	729	730	851	849	PS	1451	NA	82
11	1987	10	26	1	735	730	904	849	PS	1451	NA	89
12	1987	10	28	3	741	725	919	855	PS	1451	NA	98
13	1987	10	29	4	742	725	906	855	PS	1451	NA	84
14	1987	10	31	6	726	725	848	855	PS	1451	NA	82
15	1987	10	1	4	936	915	1035	1001	PS	1451	NA	59
16	1987	10	2	5	918	915	1017	1001	PS	1451	NA	59
17	1987	10	3	6	928	915	1037	1001	PS	1451	NA	69
18	1987	10	4	7	914	915	1003	1001	PS	1451	NA	49
19	1987	10	5	1	1042	915	1129	1001	PS	1451	NA	47
20	1987	10	6	2	934	915	1024	1001	PS	1451	NA	50
21	1987	10	7	3	946	915	1037	1001	PS	1451	NA	51
22	1987	10	8	4	932	915	1033	1001	PS	1451	NA	61
23	1987	10	9	5	947	915	1036	1001	PS	1451	NA	49
24	1987	10	10	6	915	915	1022	1001	PS	1451	NA	67
25	1987	10	11	7	916	915	1006	1001	PS	1451	NA	50
26	1987	10	12	1	944	915	1027	1001	PS	1451	NA	43
27	1987	10	13	2	941	915	1036	1001	PS	1451	NA	55
28	1987	10	14	3	930	915	1029	1001	PS	1451	NA	59

Why Subsets?

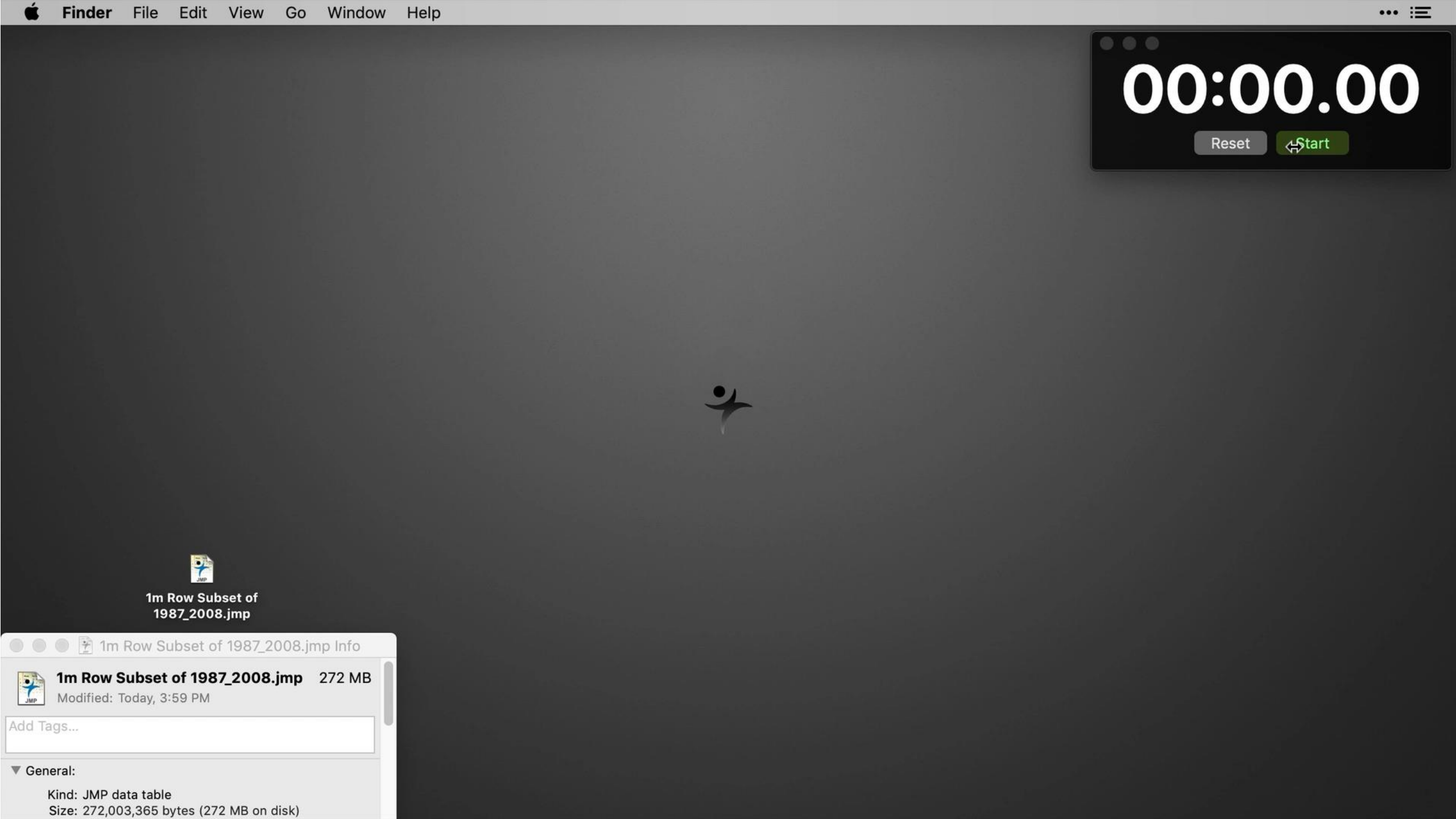
A review of the properties of statistical estimators:

asymptotic consistency

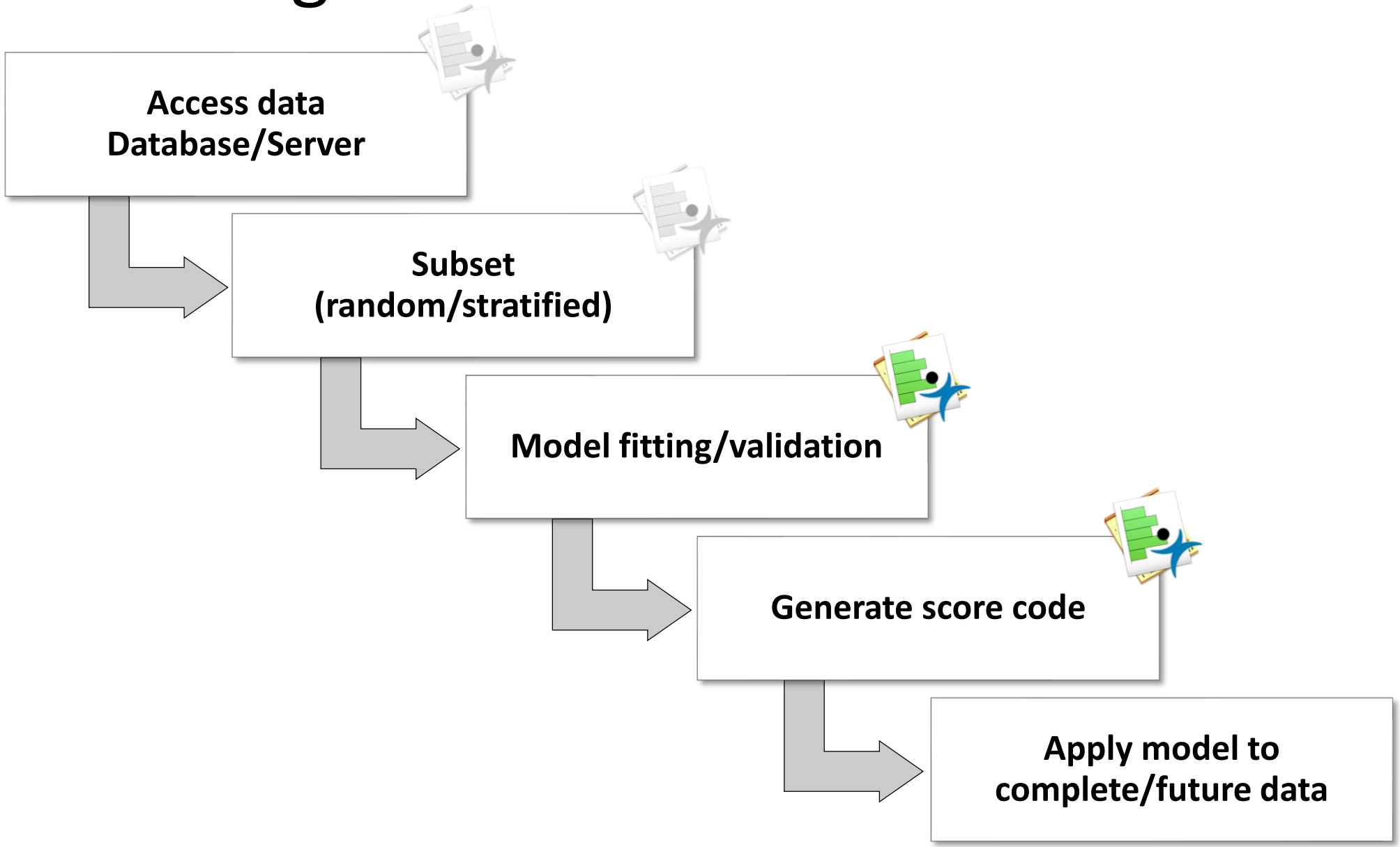
$$\operatorname*{plim}_{n\to\infty} T_n = \theta.$$

a sample of 1 million
is nearly as good as 100 million*

The Value of Analytic Immediacy


Finder File Edit View Go Window Help
00:00.00
Reset
Start
1m Row Subset of 1987_2008.jmp
1m Row Subset of 1987_2008.jmp Info
1m Row Subset of 1987_2008.jmp 272 MB
Modified: Today, 3:59 PM
Add Tags...
General:
Kind: JMP data table
Size: 272,003,365 bytes (272 MB on disk)

Proxy Modeling Process



Today

- The challenge of big data
- Methods for working with big data in JMP
- JiEL – JMP in Everyday Life

JMP in Everyday Life

Fitbit Steps Data, 2015-Present

2.18 million rows @ 1 Minute Resolution