



Funded Store Hours

Justin Tian

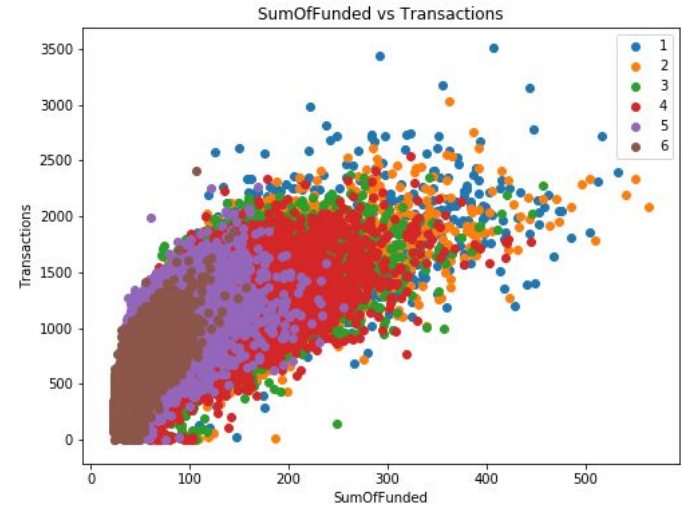


Objective

- Do clustering analysis for the 1150 stores
- Identify over-funded and under-funded stores

Over Funded

- **Conversion:** Transactions / FinalTraffic
 - Over Funded \longrightarrow Large SumOfFunded and low conversion?
 - How about low conversion stores like these in Mall?
 - Stores may have conversion limits.
- **FundedConversion:** Transactions / SumOfFunded
 - We expect every funded hour to result in certain number of transactions.
 - Low FundedConversion \longrightarrow Over Funded



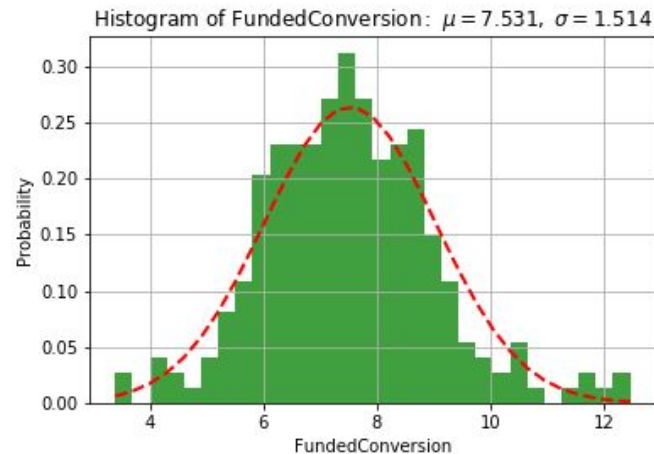
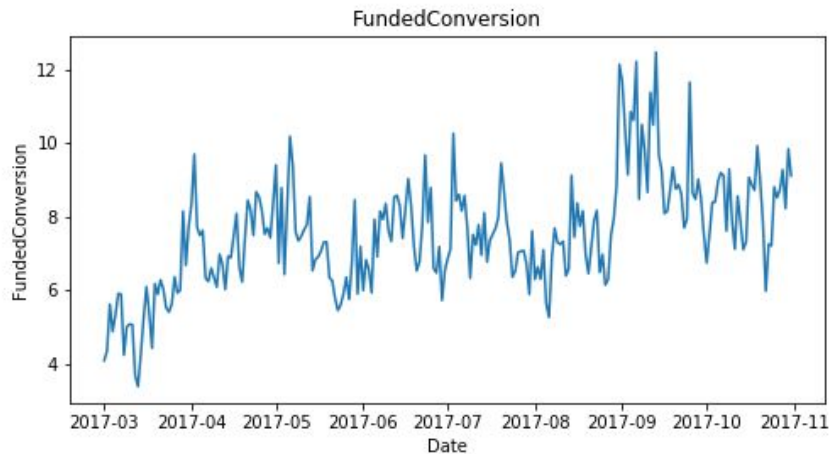


Clustering Analysis

- Focus on date range 3/1/2017 - 10/31/2017
- Focus on FundedConversion and FinalTraffic First
- Aggregate analysis for each of the stores

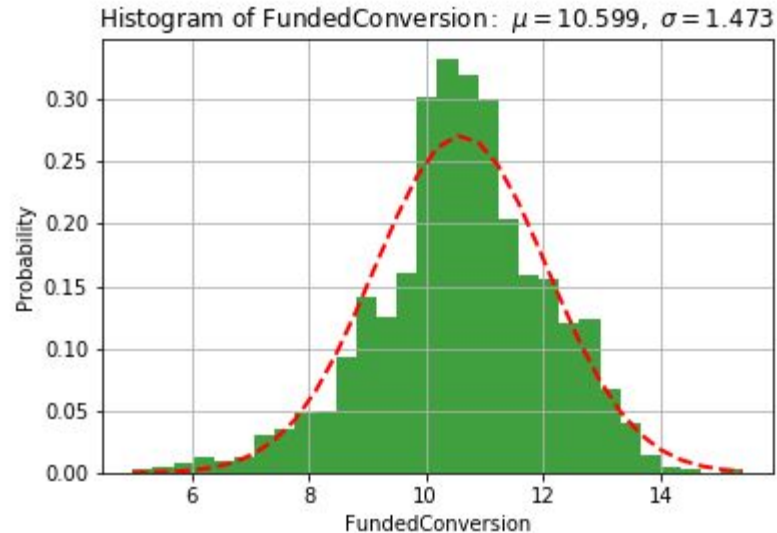
FundedConversion For One Store

- $\text{FundedConversion} = \text{Transactions} / \text{SumOfFunded}$
- Fit The Conversion Rates by A Gaussian
- Get Mean Of FundedConversion



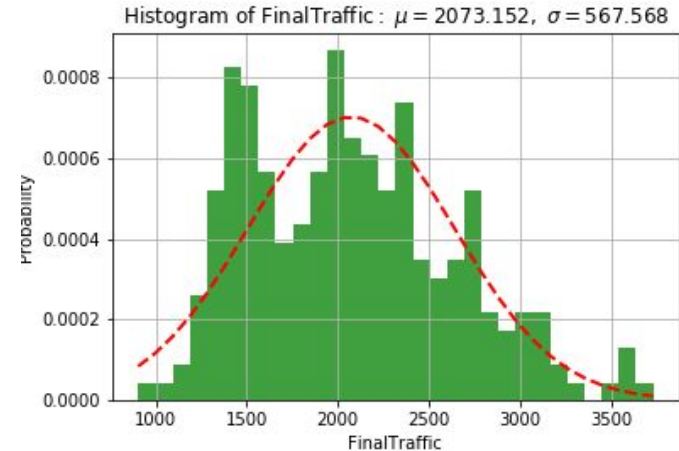
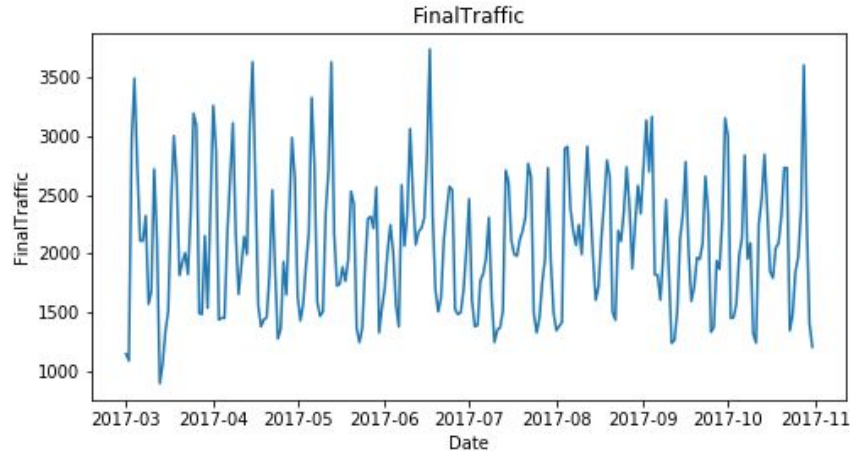
FundedConversion For All Stores

- Get the means for all stores
- Fit the Distribution for all store means



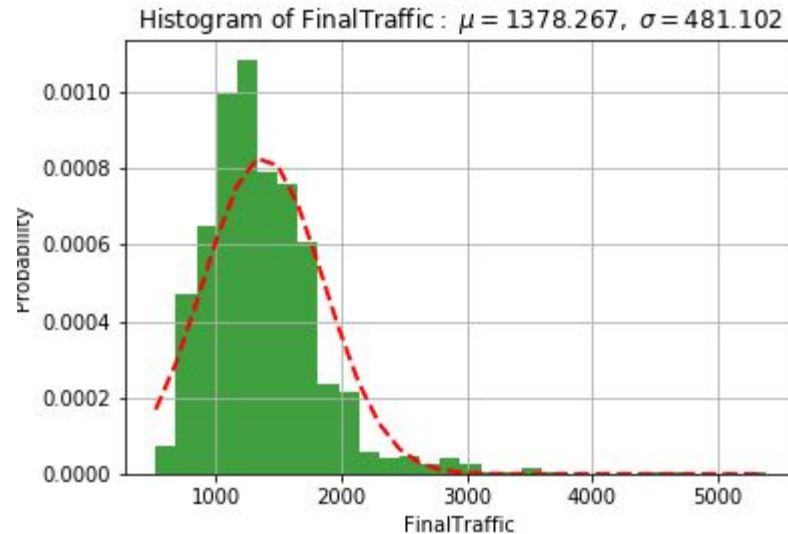
FinalTraffic For One Store

- Fit The FinalTraffic by A Gaussian
- Compute the Mean Of FinalTraffic

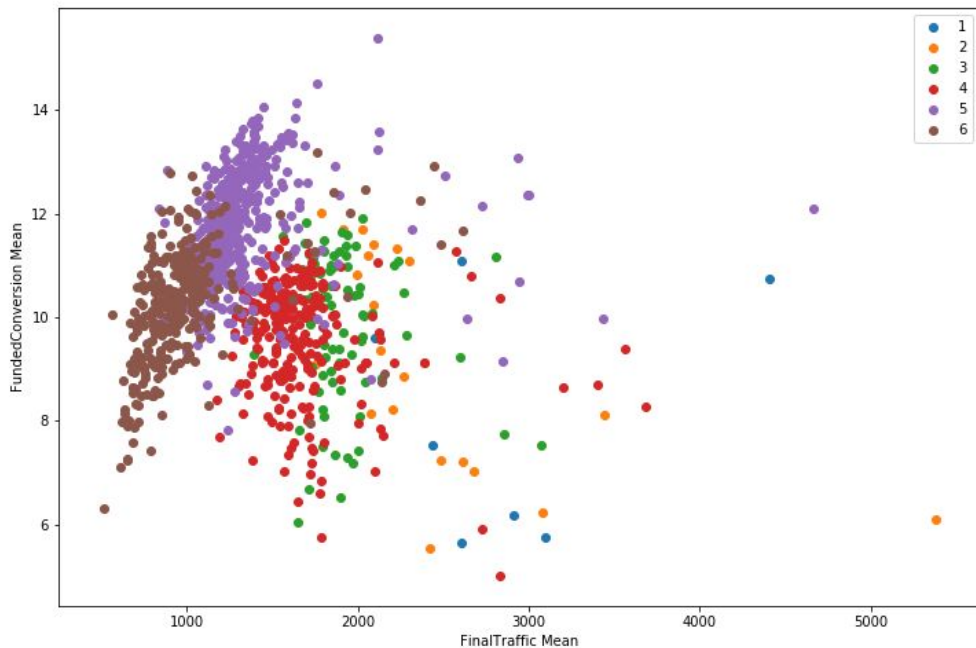


FinalTraffic For All Stores

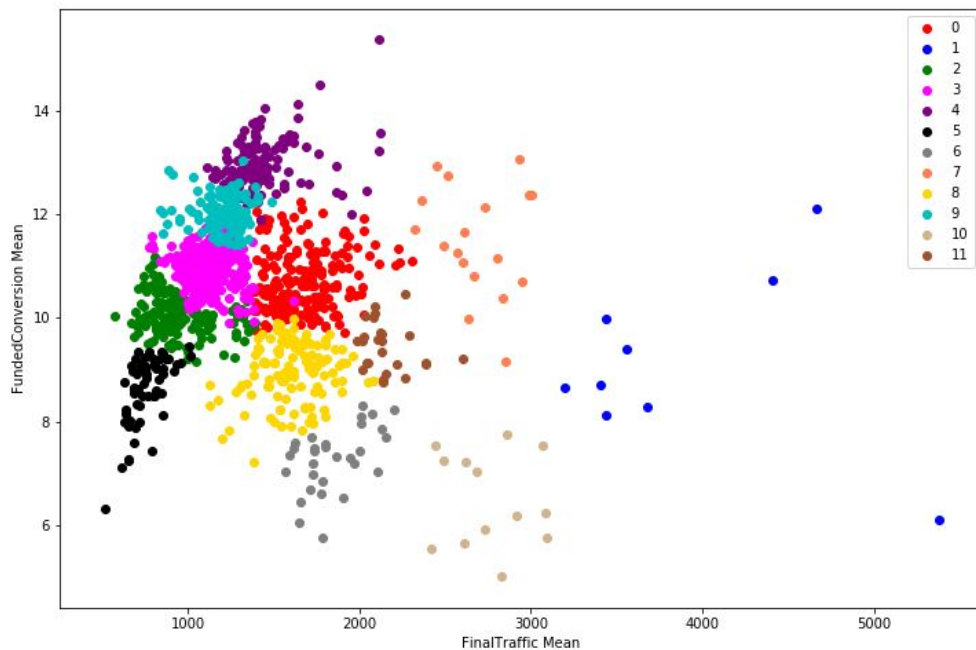
- Get the means for all stores
- Fit the Distribution for all store means



FundedConversion vs FinalTraffic By Store Levels

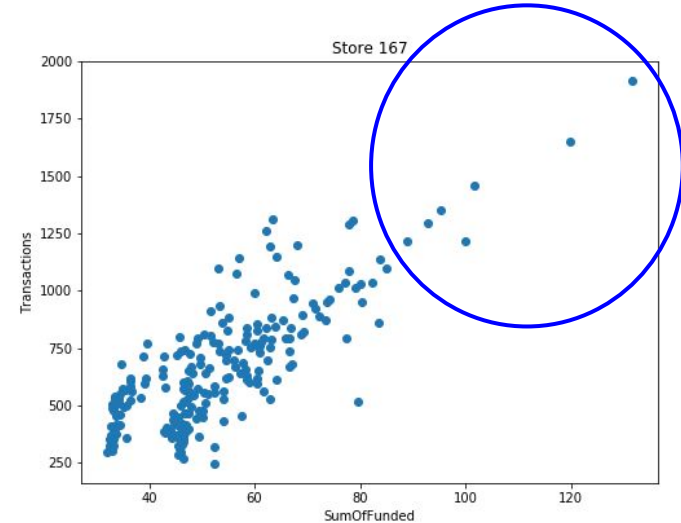
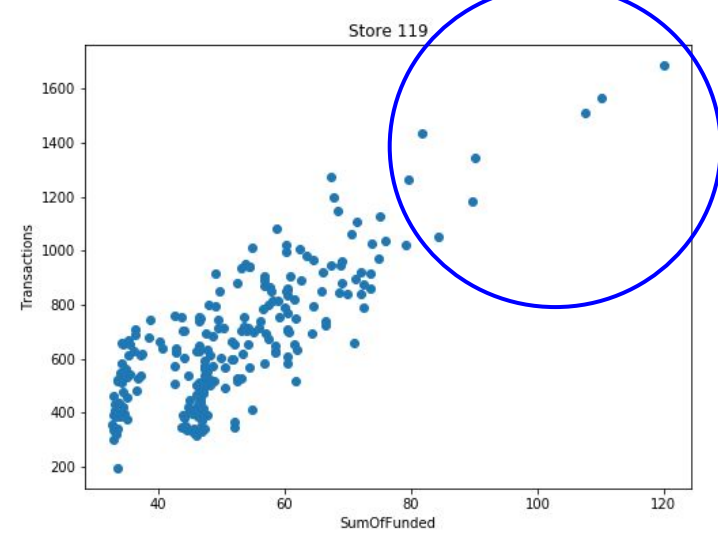


Clusters On FundedConversion vs FinalTraffic



Under Funded Stores

Store list (4): 33, 79, 84, 91, 108, 111, 117, 118, 119, 127, 158, 159, 160, 167, 182, 184, 188, 189, 190, 198, 201, 211, 218, 232, 233, 234, 243, 247, 248, 256, 258, 265, 287, 289, 303, 305, 306, 307, 311, 316, 318, 319, 330, 336, 358, 401, 416, 434, 439, 446, 451, 470, 475, 480, 486, 491, 495, 505, 514, 518, 520, 522, 526, 527, 534, 559, 581, 610, 611, 640, 641, 646, 660, 664, 679, 690, 699, 701, 703, 710, 711, 720, 727, 730, 735, 743, 745, 757, 765, 768, 771, 780, 783, 788, 985, 988, 989, 990, 1004, 1005, 1006, 1011, 1031, 1034, 1050, 1051, 1067, 1096, 1104, 1142, 1144, 1146, 1156, 1229, 1253, 1266, 1281, 1305, 1322, 1364, 1399





Over Funded Stores

Store list (10): 7, 8, 57, 229, 374, 381, 393, 418,
541, 769, 781, 782, 1328

