**Edge Proposal: Blue Bikes**

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**Problem**: During certain time windows during the day, many Blue Bike customers/potential customers are unable to ride bikes since various bike stands experience high demand and are empty.

**Proposed Solution**: Provide Blue Bikes with (1) a list of bike stands that will benefit the most from interventions aimed to both improve customer experience and potentially reduce costs and (2) provide brief explanations of these solutions.

***Methodology***:

1. Build a predictive model: Given any time of day how many bikes are at a station.
   1. Could be 0 if it has no bikes, 1 if it has bikes.
   2. This allows us to label our data.
2. Given that station X at time Y has no bikes, how long will it take for a bike to arrive.
   1. Calculate a wait time for every station X
   2. Provide intervention analysis for these stations if their wait times are significant
3. Potential Interventions.
   1. Refill the bike station more often
      1. Increase current infrastructure to restock bike stands more than currently done.
      2. This is a high cost
   2. Add more capacity
      1. add 10+? 5+? At each of these stands so it can hold more bikes
      2. come up with an arbitrary cost.
   3. Incentive plans:
      1. Subsidize/ give free rides for certain rides and say that will reduce cost by $X amount.
4. Proposals
   1. Show how cost effective (or not each intervention is for given arbitrarily defined costs.

**EDA Ideas**

* 1. Top stations by time.
  2. Top riding times.
  3. Top ridings times by place.
  4. Revenue: Member # \*Member
  5. Revenue per month.
  6. What are the top 15 single use stations.
  7. When are the most single uses occurring.
  8. Calculate yearly revenue.

daniel freund (potential resource)