# Forecasting the revenue generated by ATM / CARD / CASH for EZTABLE to identify the potential / actual revenue from different payment systems.

EZTABLE
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## Group #6

Sam Wang
Sean Xie
Lydia Jiang
Suneel

# Business problem

- The actual revenue is not all the purchasing data.
- The customer consuming habits change. We thought it is the opportunity of our client.

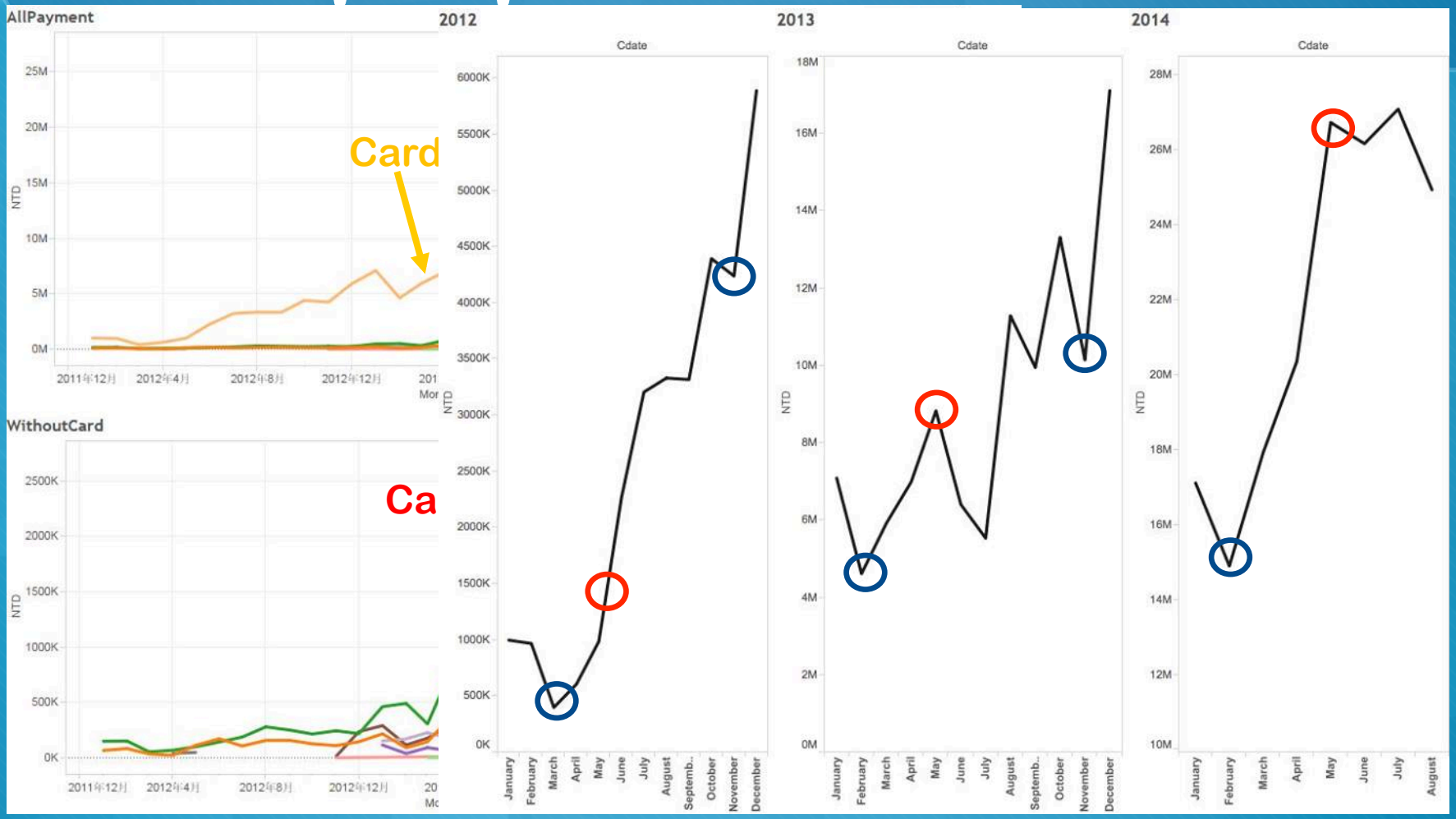
# Forecasting goal

- Forecasting the monthly revenue from different payment systems in three month ahead.
- Forecasting two type of data, all and paid.
- Let our client (EZTABLE) make strategy more accurately to meet the customer needs in near future.

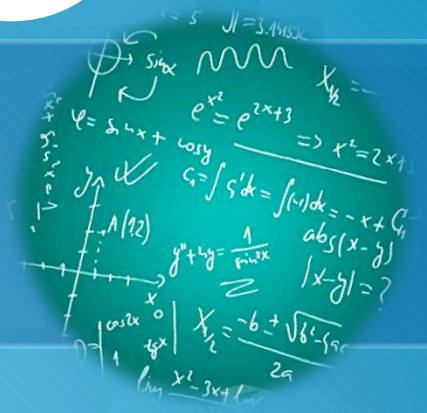
# Data description

- Source: EZTABLE'S Purchase data
- Quality:
  - Missing Value
  - Outlier
  - Status
    - 1.New 2.Canceled 3.Paid

# Data preparation

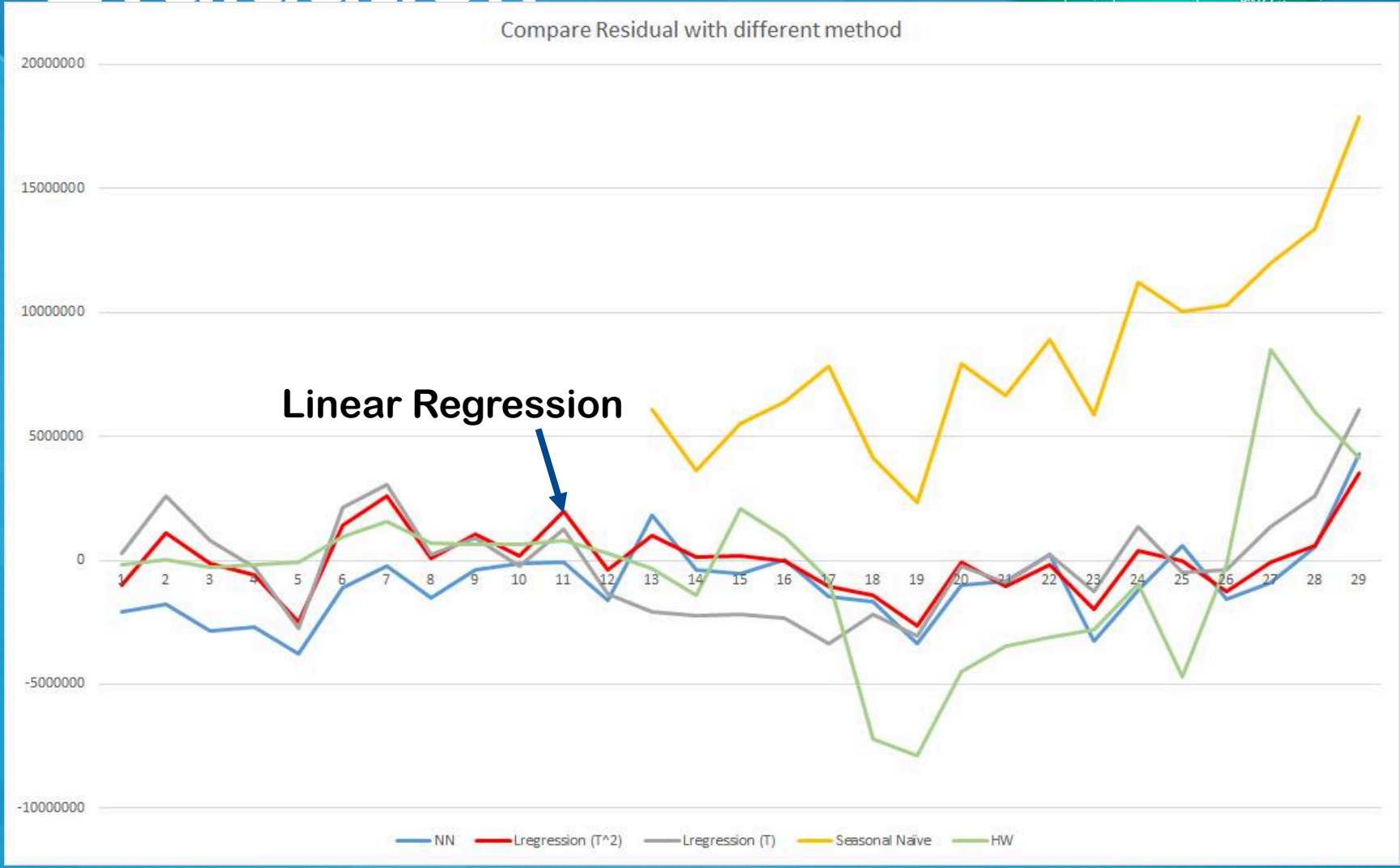


# Methods



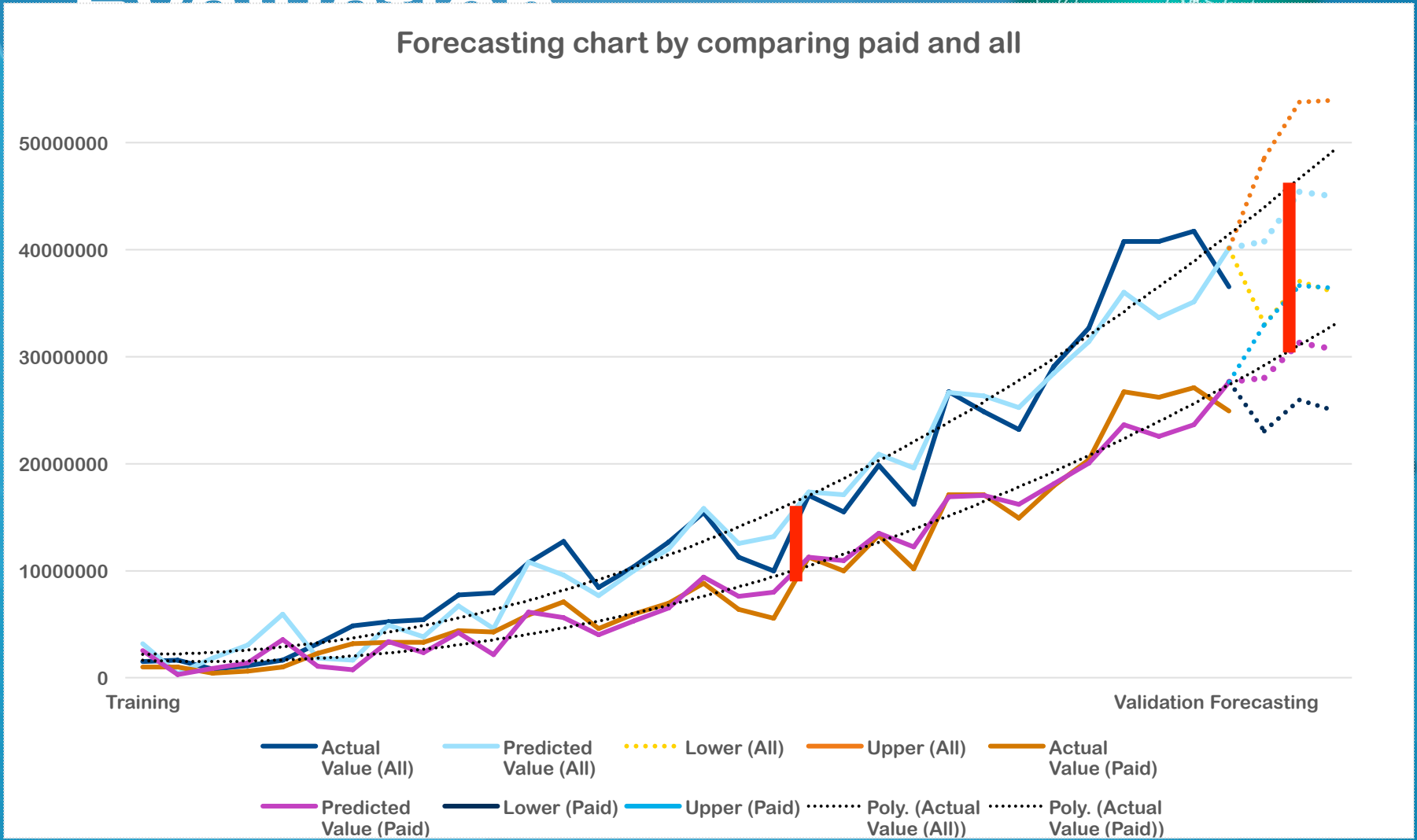
- Derived Variable: T, T square, seasonal indexes, dummy (monthly), log
- Testing methods: Seasonal Naïve, Holt-Winter, Linear regression , Neural Network
- Outputs: The forecasting revenue in next three months

# Evaluation


Compare Residual with different method
20000000
15000000
10000000
5000000
0
-5000000
-10000000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
Linear Regression
NN
Lregression (T^2)
Lregression (T)
Seasonal Naïve
HW

# Evaluation

| RMSE | All | Paid |
|---|---|---|
| Training | 2078464.644 | 1354213.306 |
| Validation | 5910868.301 | 3692201.241 |



# Recommendations

- EZTABLE can use this model to generate the forecasting of both actual and potential.
- We suggest EZTABLE can uses these forecasts to make different strategies of promotion.
- We find that the different between actual and potential revenue is huge. There are maybe some way to make system more convenient to pay. It can help them make much more revenue.

# Thank you for your listening