Charity Data Analysis

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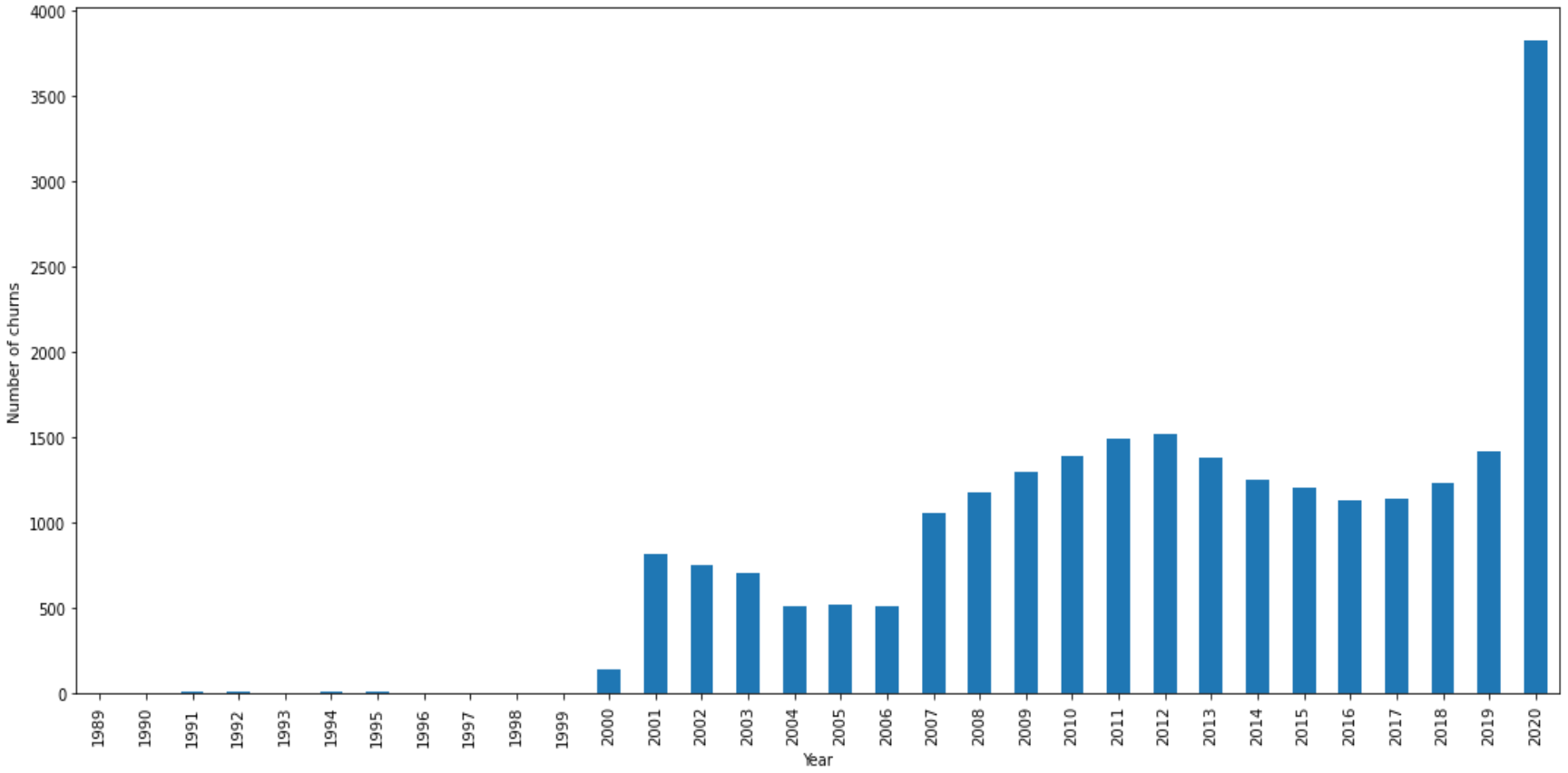
The problem of donor churn

- Total number: **24,589 churns**
- Duration for the churns: **31 years**, from 1989 to 2020
- Average number per year: About **793 churns**
- Total amount lost per year: About **$190,366**
  - Suppose that the amount for each donation per month is $20
  - Total amount lost per year due to the churns = average number of churns per year * 12 months * $20 per month = 793 * 12 * 20 = $190,366

The progress of churns over time

- Churns are worse over time
- Significant increase since 2001
- Number of churns was sharply increased from about 1,500 in 2019 to nearly 4,000 in 2020

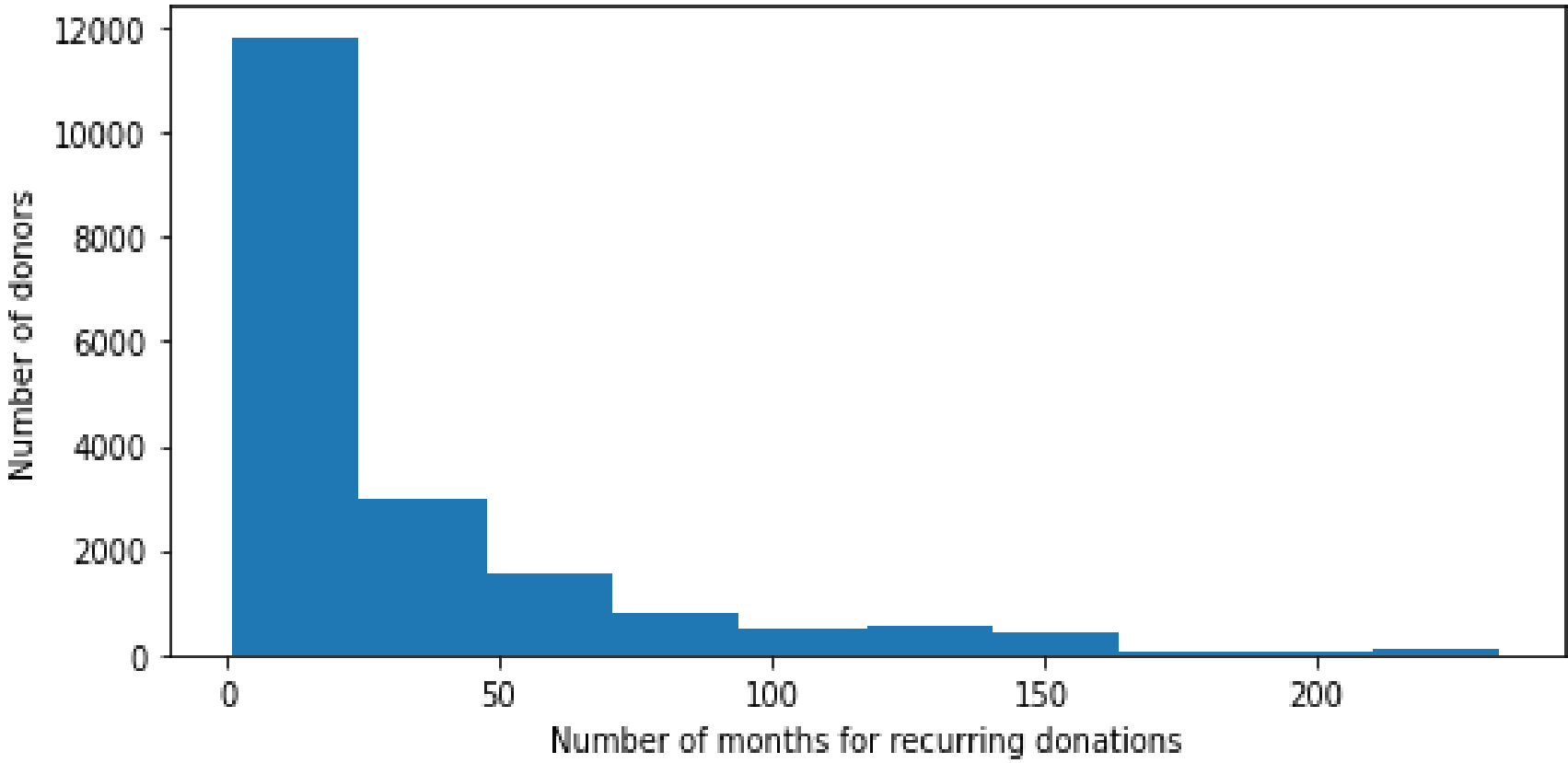


Downgrade and churns

- Number of churns after a downgrade: **296 churns**
- Although it is a small number, we may need to follow up the cases of Downgrade to avoid unnecessary churns

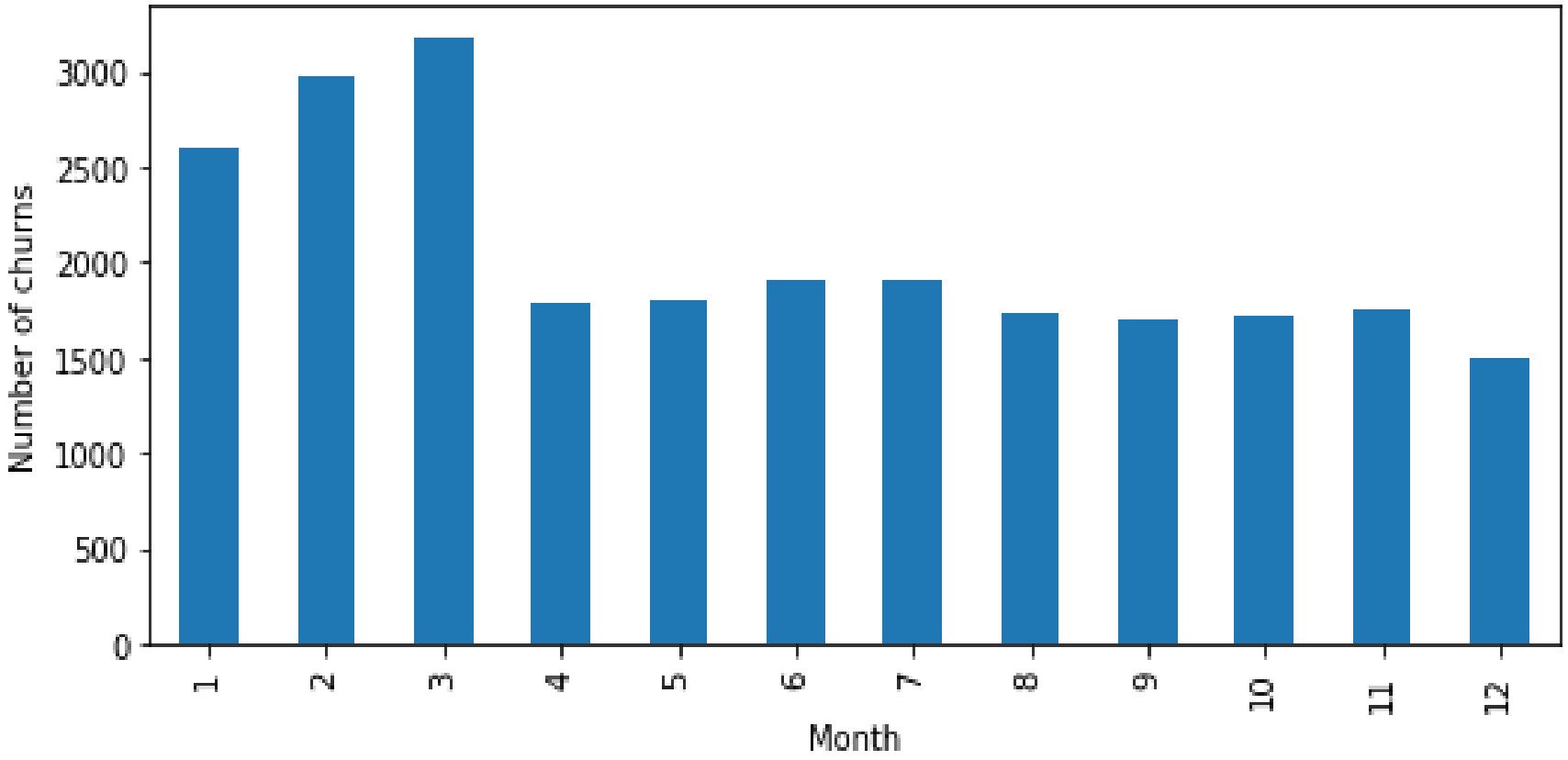
The duration for recurring donations

- Average number of months for recurring donations: **32.2 months**
- Thus, we may need to follow up with donors who have their donations over continuous 30 months



The churns over months

- Churns in January, February, and March are significantly more than those in other months
- Thus, we may also need to focus on these months



Summary

- The problem of donor churns is big, and it is increasingly worser over time
- To solve the problem, we may need (i.e., based on the data I have)
  - Follow up the cases of Downgrade to avoid unnecessary churns
  - Follow up with donors who have their donations over continuous 30 months
  - Focus on January, February, and March
- If I have more data about donors, I can
  - Use machine learning methods to identify what variables which have effects on the churns
  - Build networks (e.g. donor networks based on social networks) to identify critical donors, which might not only help to reduce churns, but also help to increase the number of new donors