

SBIR: Understanding the Data

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Last edited February 10, 2021

Please note that this code is not yet complete. It only contains the data for 5770 awards, and will need to be updated.

SBIR Award Data Set

The `sbir_awards` data set includes 5770 awards that were scraped from `sbir.gov`, and the data set includes information for 20 variables related to each award.

```
## Rows: 5,770
## Columns: 20
## $ agency                <chr> "Department of Defense", "D...
## $ branch                <chr> "Defense Advanced Research ...
## $ contract              <chr> "140D0420C0006", "140D0420C...
## $ agency_tracking_number <chr> "D2-0016", "D2-0122", "D2-1...
## $ amount                <chr> "$2,247,757.00", "$2,235,31...
## $ phase                 <chr> "Phase II", "Phase II", "Ph...
## $ program               <chr> "SBIR", "SBIR", "SBIR", "SB...
## $ solicitation_topic_code <chr> "HR001119S0035-02", "HR0011...
## $ solicitation_number    <chr> "HR001119S0035", "DARPA SBI...
## $ solicitation_year      <dbl> 2019, 2019, 2019, 2017, 201...
## $ award_year             <dbl> 2020, 2020, 2020, 2020, 202...
## $ award_start_date_proposal_award_date <date> 2020-02-18, 2020-02-05, 20...
## $ award_end_date_contract_end_date <date> 2021-02-20, 2021-02-04, 20...
## $ duns                  <chr> "80507421", "79544913", "19...
## $ hubzone_owned         <chr> "N", "N", "N", "N", "N", "N...
## $ woman_owned           <chr> "N", "N", "N", "N", "N", "Y...
## $ socially_and_economically_disadvantaged <chr> "N", "N", "N", "N", "N", "N...
## $ link                  <chr> "https://www.sbir.gov/sbirs...
## $ recipient_information <chr> "Principal InvestigatorTRUE...
## $ abstract              <chr> "Abstract\n          Respirat..."
```

100% of the included awards are from the Department of Defense.

```
##      vars      n      mean      sd median trimmed      mad min      max      range
## X1      1 5770 438744.9 546982.9 149985 345889.4 111056.4 9162 1.2e+07 11990838
##      skew kurtosis      se
## X1 4.14      48.06 7200.88
```

62.82% of the awards were from phase I, while 37.18% were from phase II.

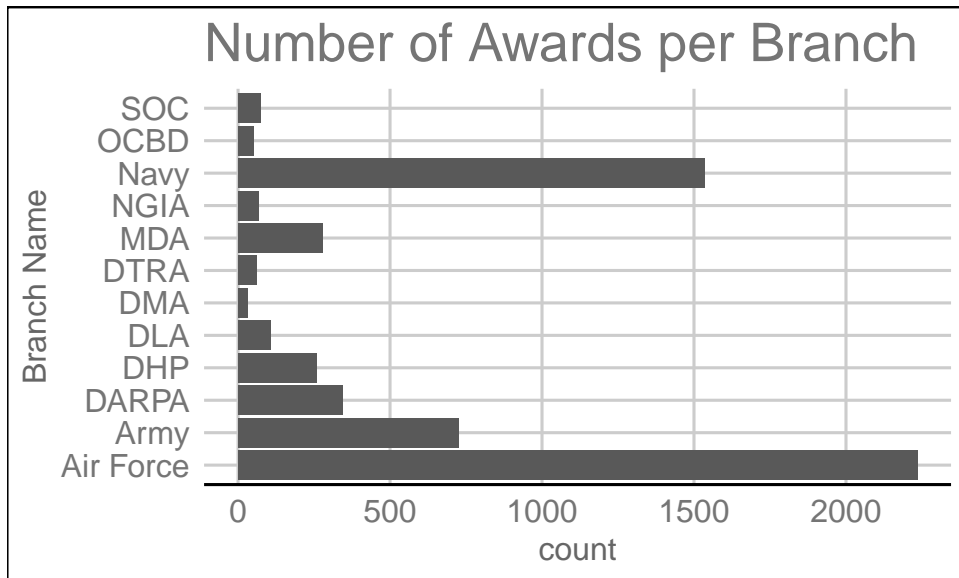


Figure 1: Figure 1.1: The Number of Awards Rewarded to Each Branch

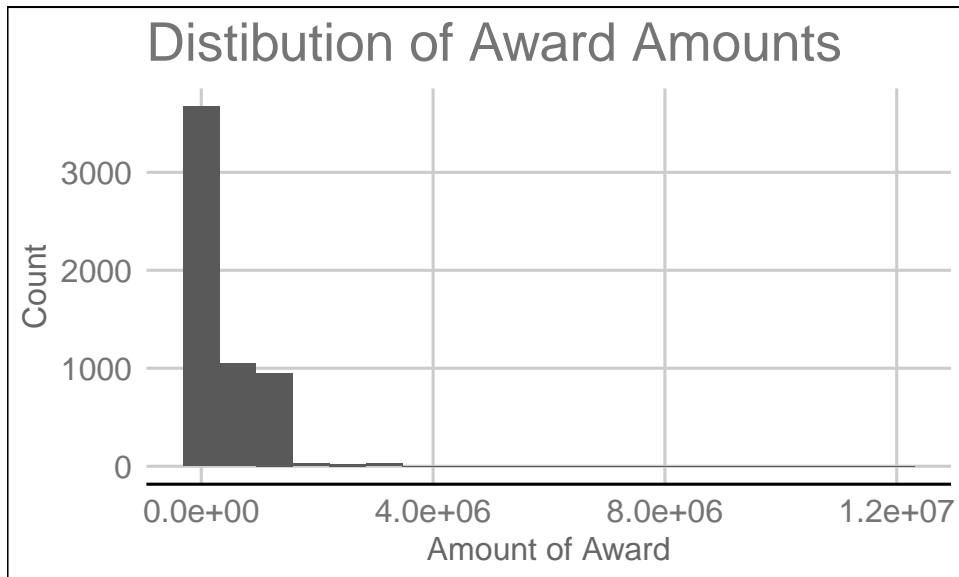


Figure 2: Figure 1.2: Visualizations of the Distribution of Award Amounts Rewarded

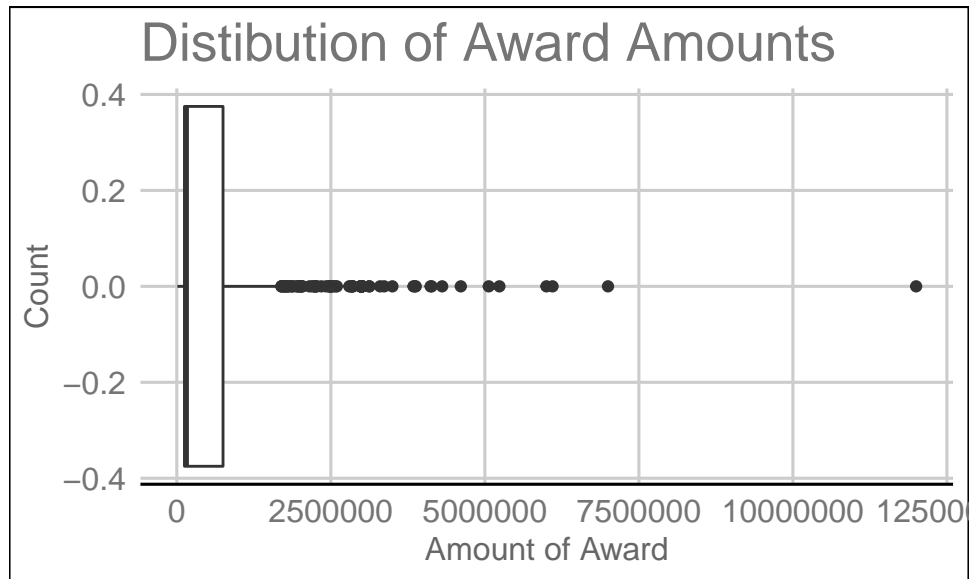


Figure 3: Figure 1.2: Visualizations of the Distribution of Award Amounts Rewarded

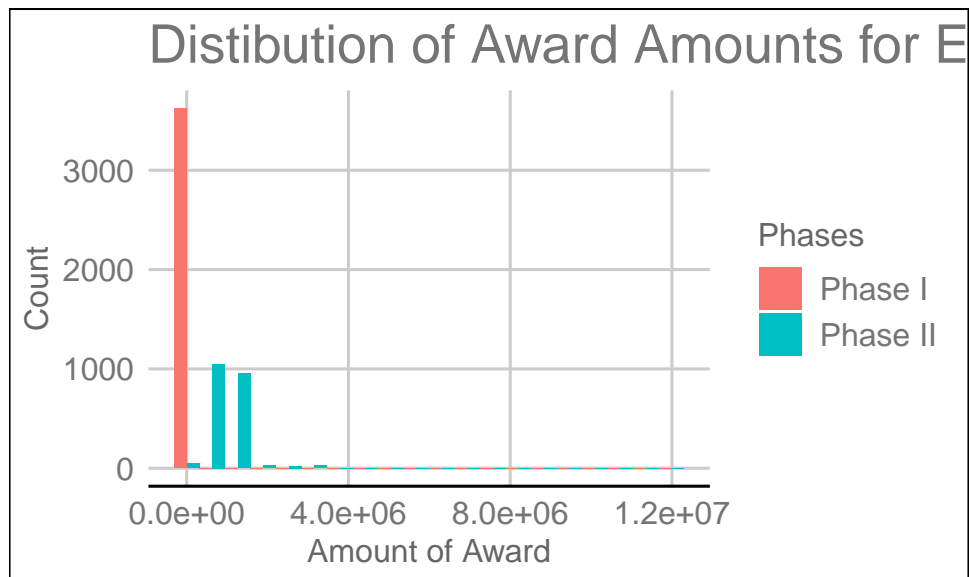


Figure 4: Figure 1.3: Visualizations of phase and award amount(Sanity Check to Show that the Highest Amounts Come From Phase II)

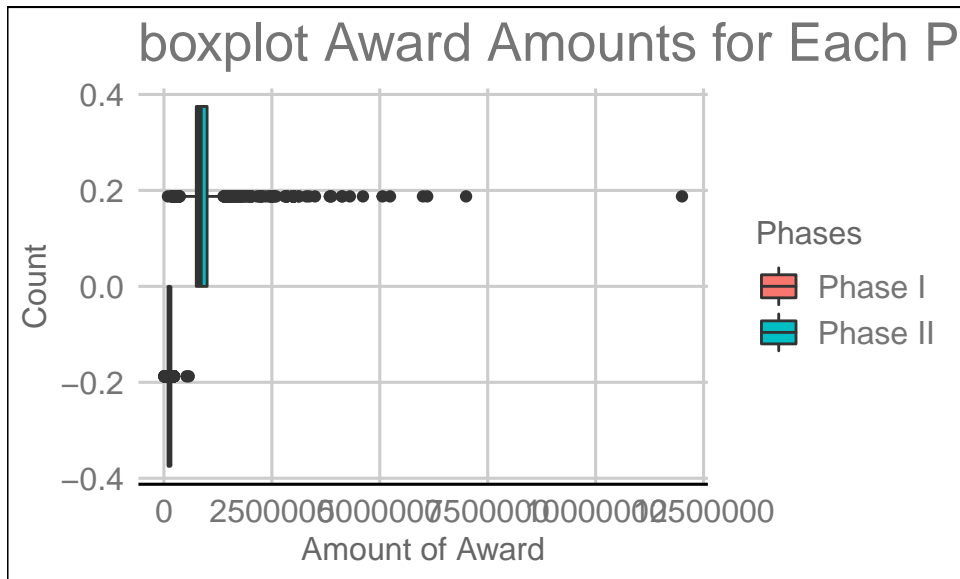


Figure 5: Figure 1.3: Visualizations of phase and award amount(Sanity Check to Show that the Highest Amounts Come From Phase II)

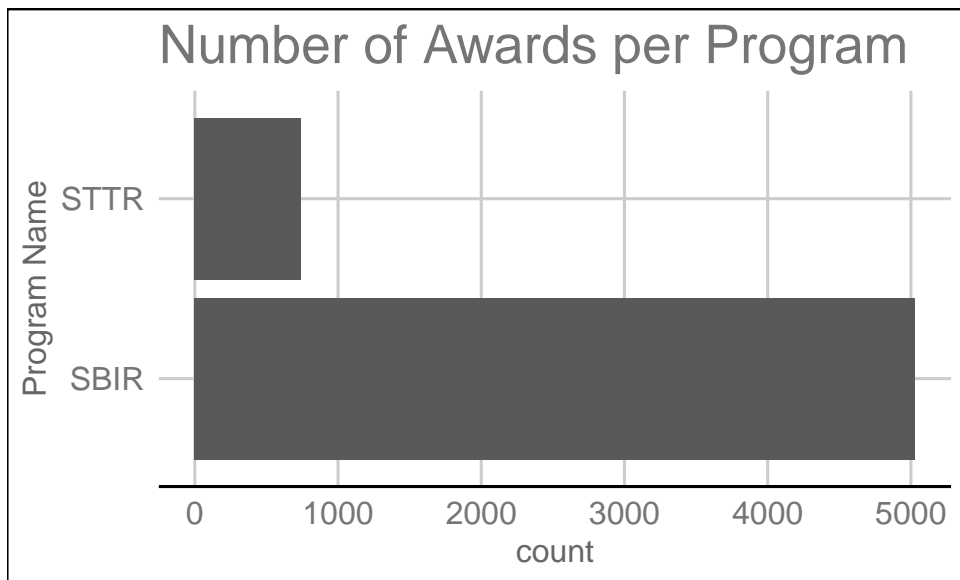


Figure 6: Figure 1.4: Visualizations of Program and Award number

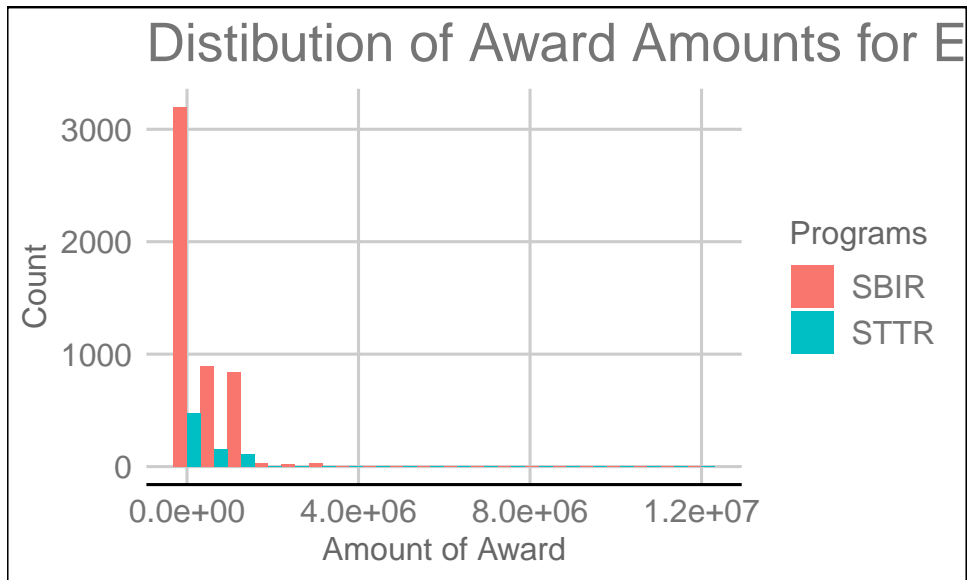


Figure 7: Figure 1.4: Visualizations of Program and Award number

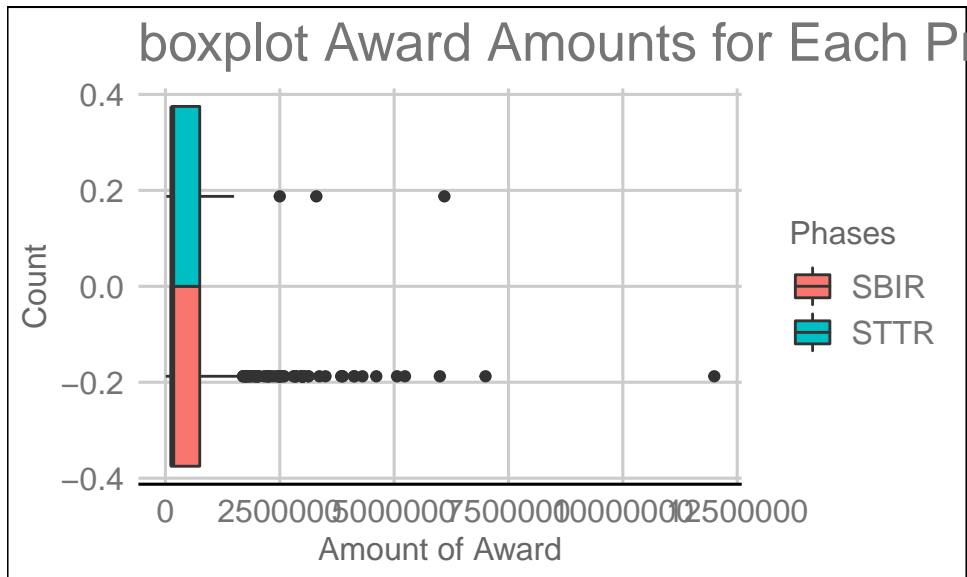


Figure 8: Figure 1.4: Visualizations of Program and Award number

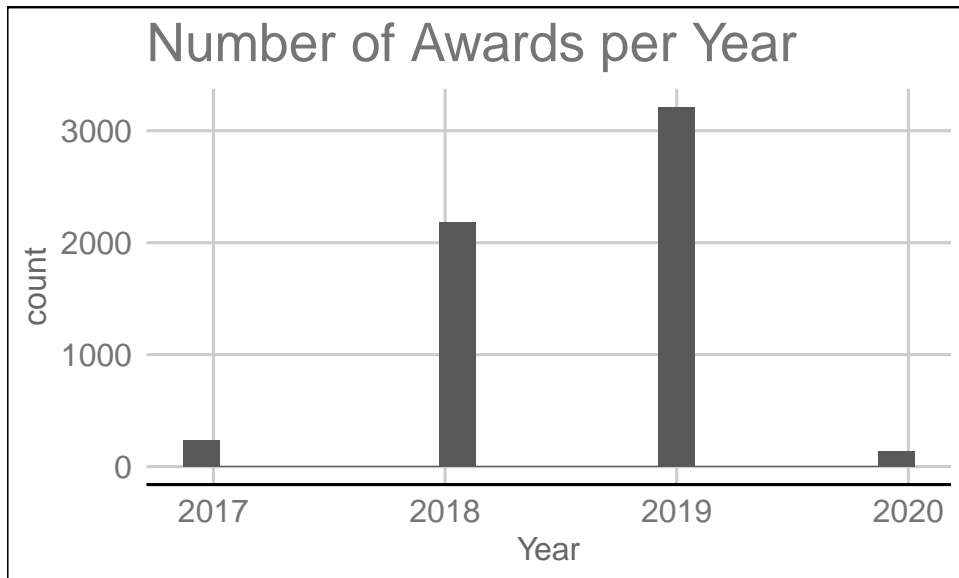


Figure 9: Figure 1.5: Visualizations of Year and Award Number

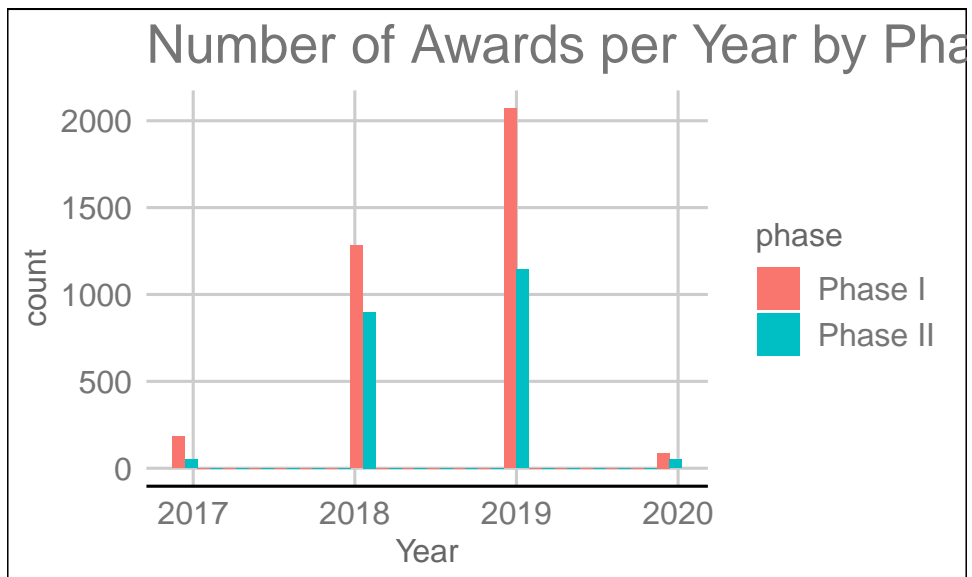


Figure 10: Figure 1.5: Visualizations of Year and Award Number

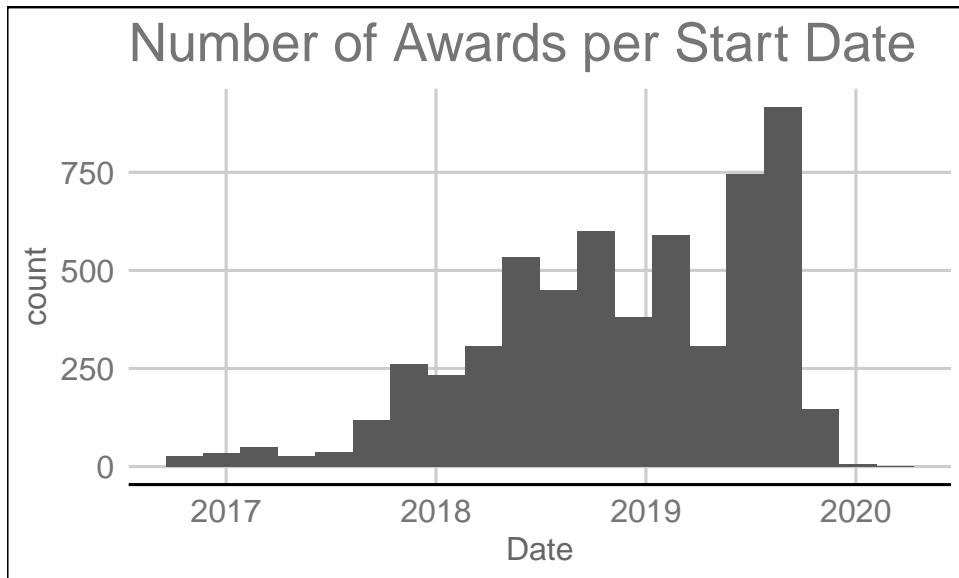


Figure 11: Figure 1.6: Visualizations of Start Date and Award Number

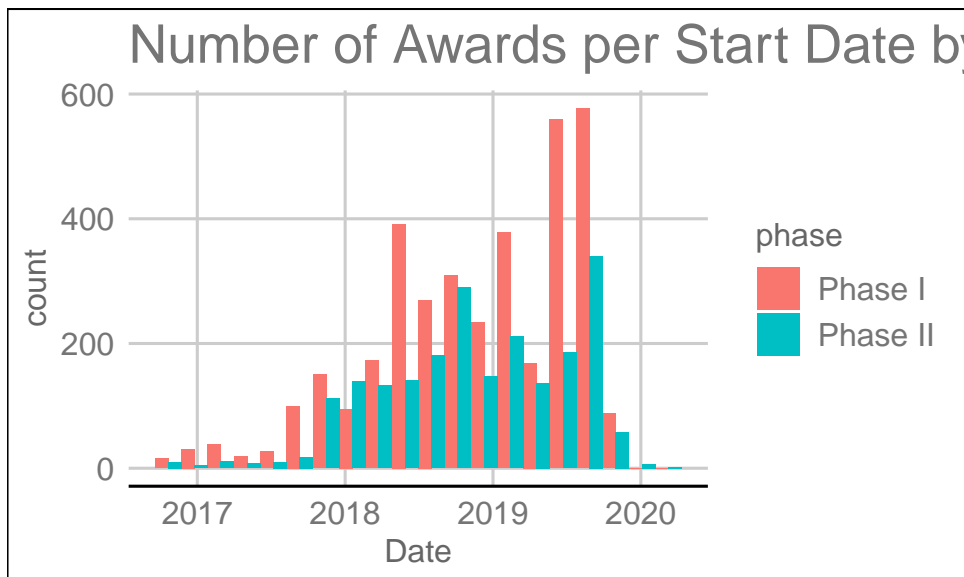


Figure 12: Figure 1.6: Visualizations of Start Date and Award Number

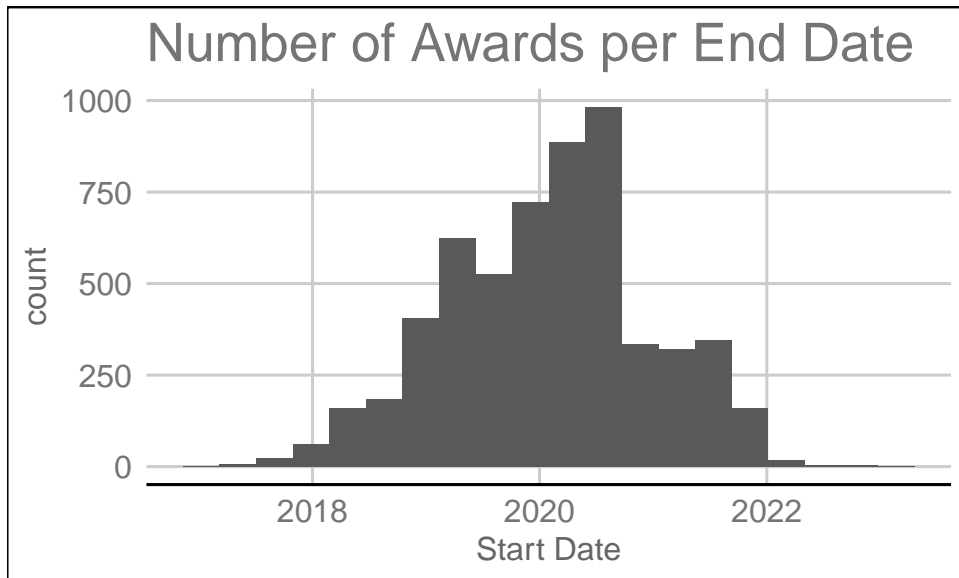


Figure 13: Figure 1.7: Visualizations of End Date and Award Number

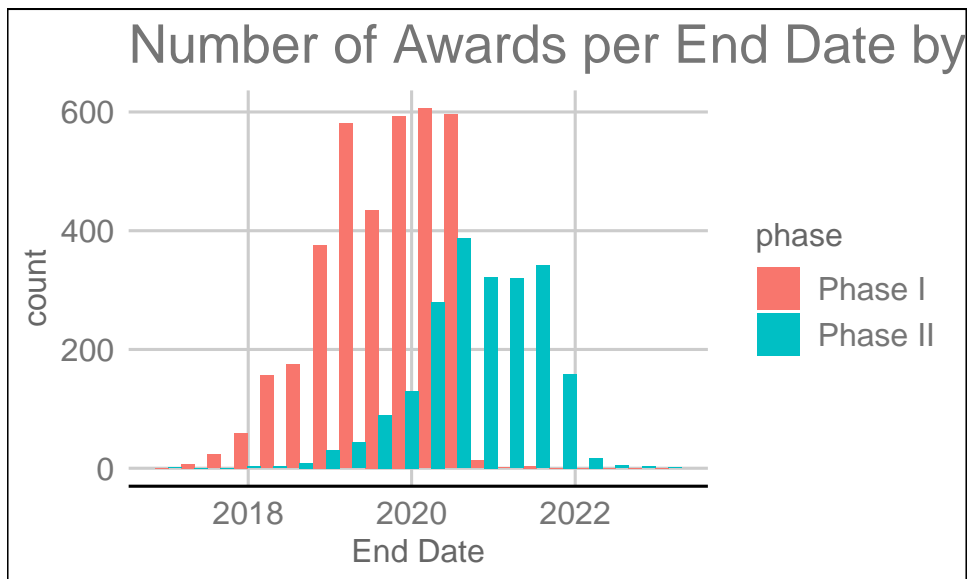


Figure 14: Figure 1.7: Visualizations of End Date and Award Number

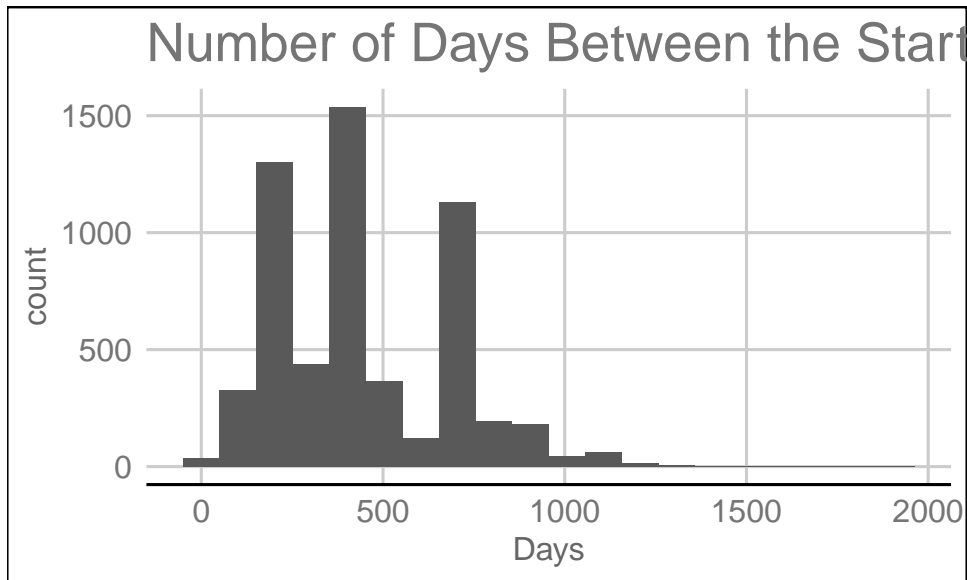


Figure 15: Figure 1.8: Visualizations of Days Between Start and End date and Award Number

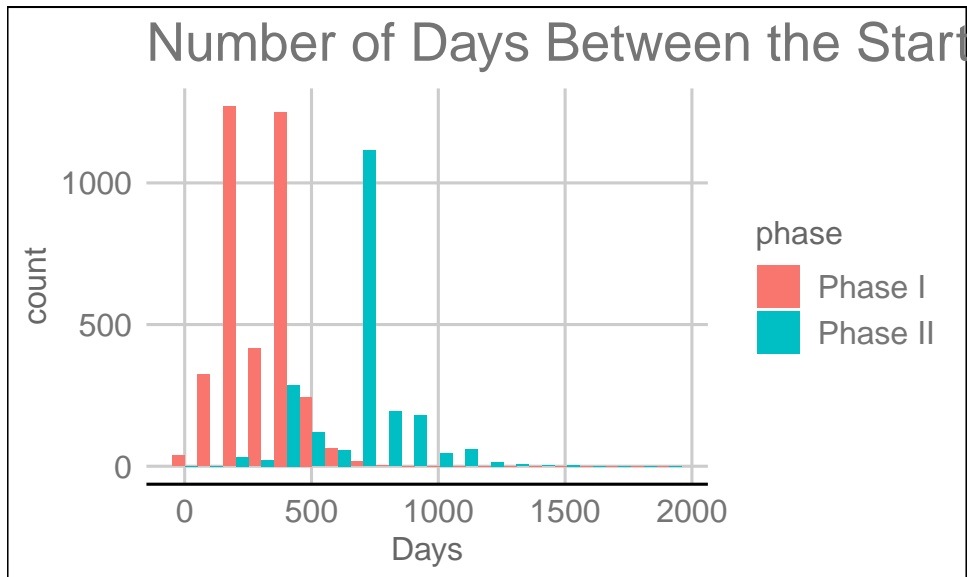


Figure 16: Figure 1.8: Visualizations of Days Between Start and End date and Award Number

87.16% of the awards were from the SBIR program, while 12.84% were from the STTR program. The oldest award included is from 2017, and the most recent award is from 2020. 2.1% of the awards were from hubzone_owned, while 97.9% were not from hubzone_owned.

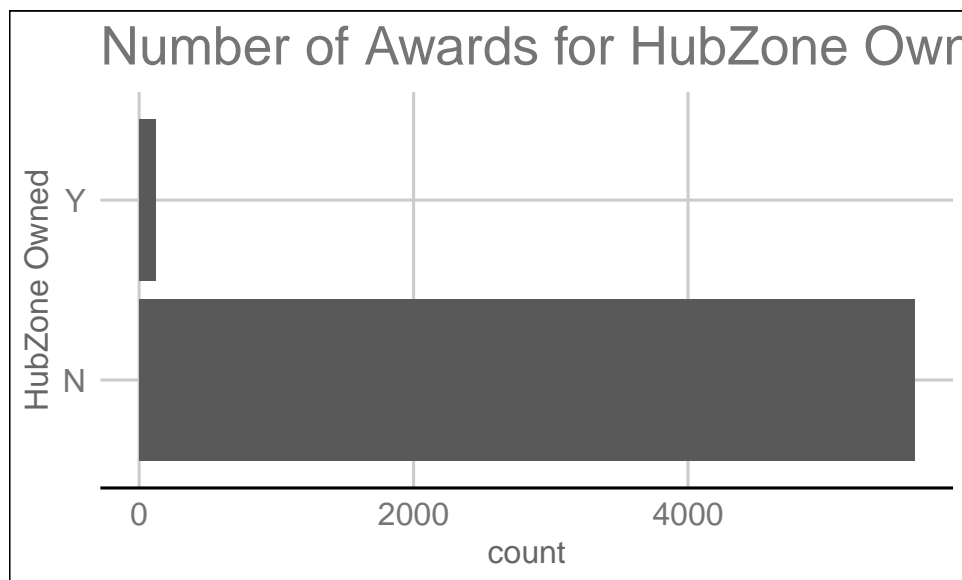


Figure 17: Figure 1.9: Visualizations of HubZone Ownership and Award Numbers

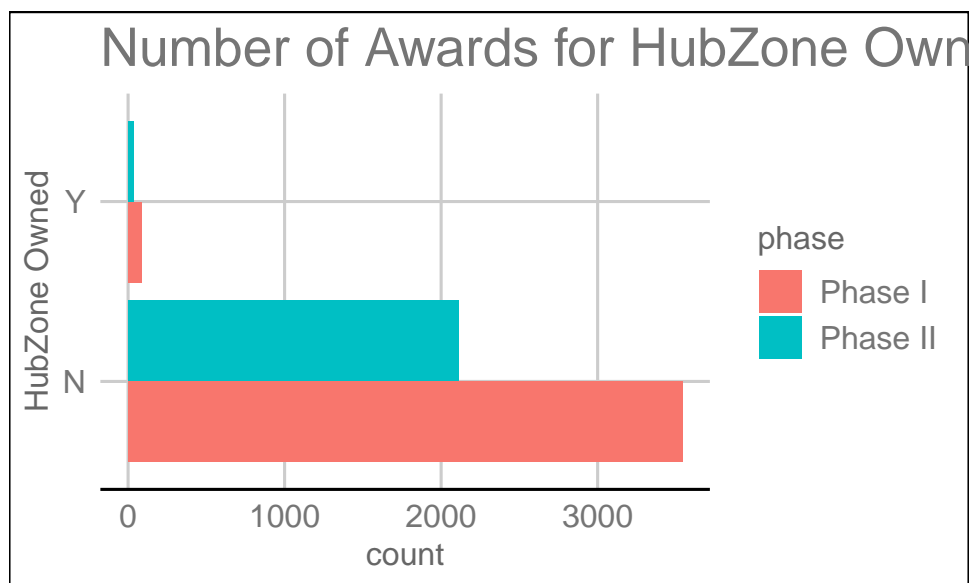


Figure 18: Figure 1.9: Visualizations of HubZone Ownership and Award Numbers

11.44% of the awards were from women owned businesses, while 88.56% were not from women owned businesses.

2.36% of the awards were from socially and economically disadvantaged, while 97.64% were not from socially and economically disadvantaged.

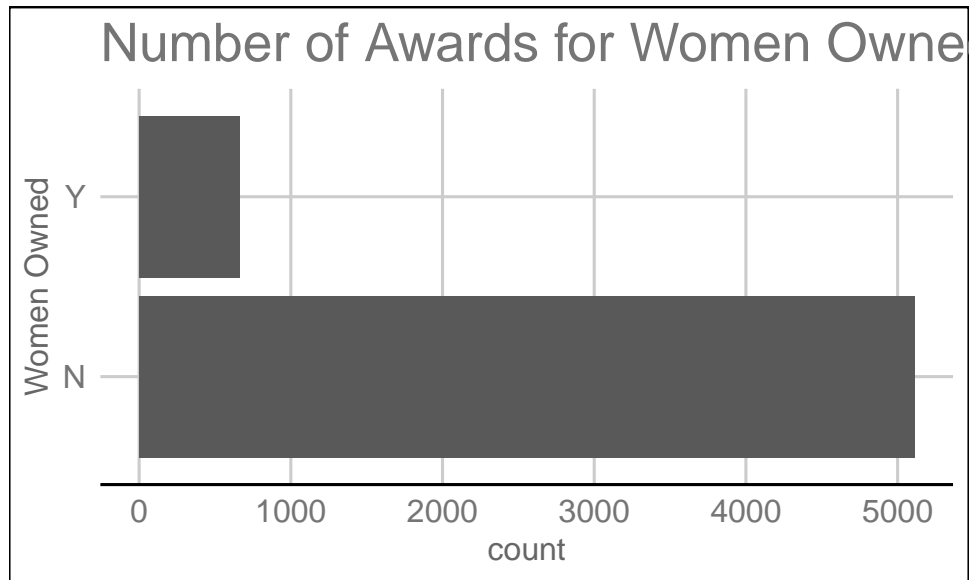


Figure 19: Figure 1.10: Visualizations of Ownership by a Woman and Award Numbers

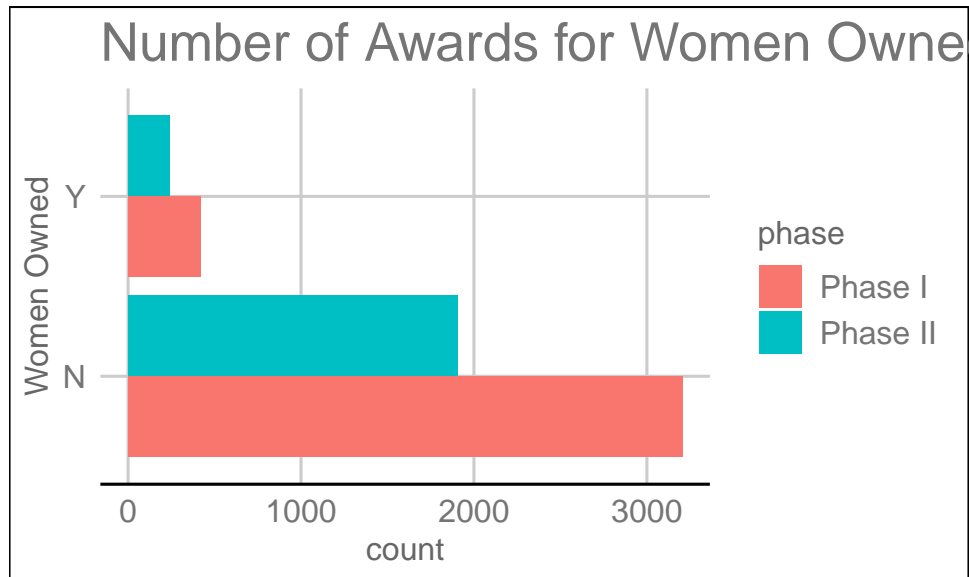


Figure 20: Figure 1.10: Visualizations of Ownership by a Woman and Award Numbers

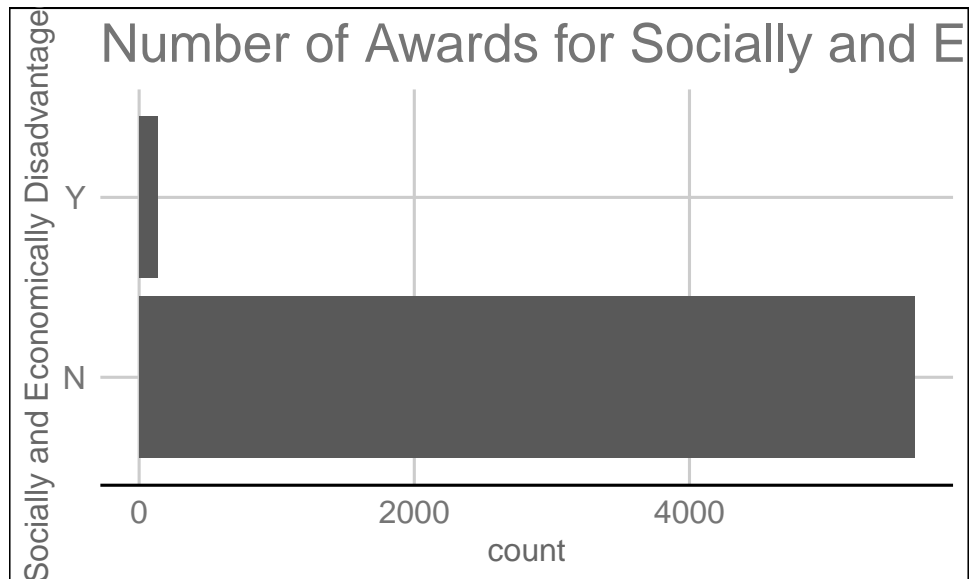


Figure 21: Figure 1.11: Visualizations of those who are socially and economically disadvantaged Number of Awards

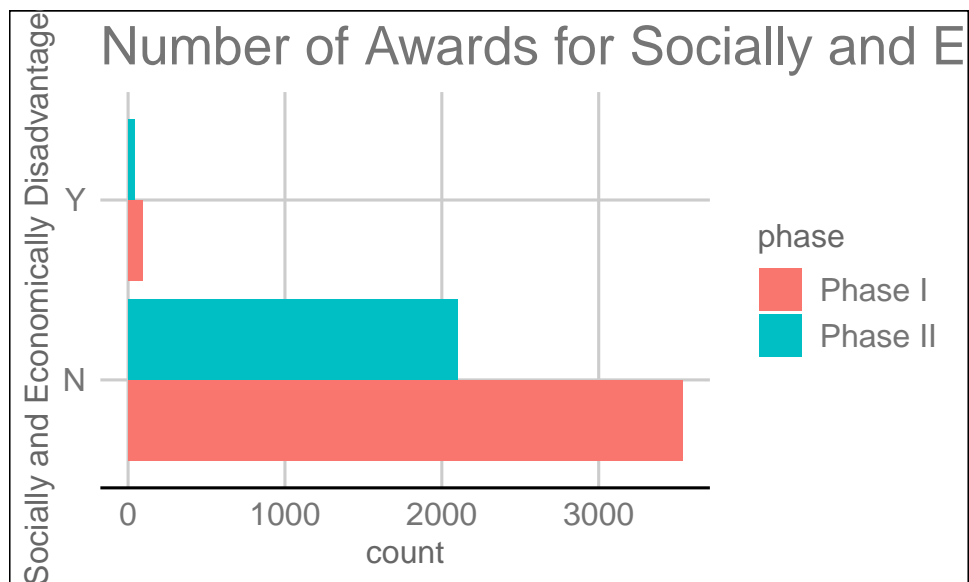


Figure 22: Figure 1.11: Visualizations of those who are socially and economically disadvantaged Number of Awards