SeptembRSE

Missing narratives around diversity and inclusion in Research Software Engineering

By Zane Dax (She/They), BHSci

@StarTrek_Lt

Who I am

- I code in Python & R *but love R more*
- I design R package hexagon logos and R related t-shirts
- Revised RainbowR website
- Enjoy front-end web development
- Bachelor's in Public Health
- Canadian 🇨🇦 Transgender 🏳️‍⚧️ Non-Binary
- Love Data Science EDA 📊
- Spend lots of time in front of my computer
- Working on building a R package on butterflies, my goal is to make my first package.

RainbowR
R

Terra

EasyClimate
Easy

chemr

MiR

butteRfly

Are there any other LGBTQ people who work in Software Development?
Specifically, are there any Transgender people ?

Minority Report

I belong to Minorities in R, a group for minorities in the R programming data science world, primarily for racial minorities, but is inclusive to all types of minorities.

I first went looking to see who in this Twitter account list of followers were publicly representing the LGBTQ community via 🏳️‍🌈 Rainbow emoji flag in their account.

This account has 1425 followers (September 15, 2021) and of those 36 accounts met the criteria of showing any of the Pride flags and had text of their pronouns. This means that 2.52% are a LGBTQ minority within this group, as the LGBTQ community is intersectional.
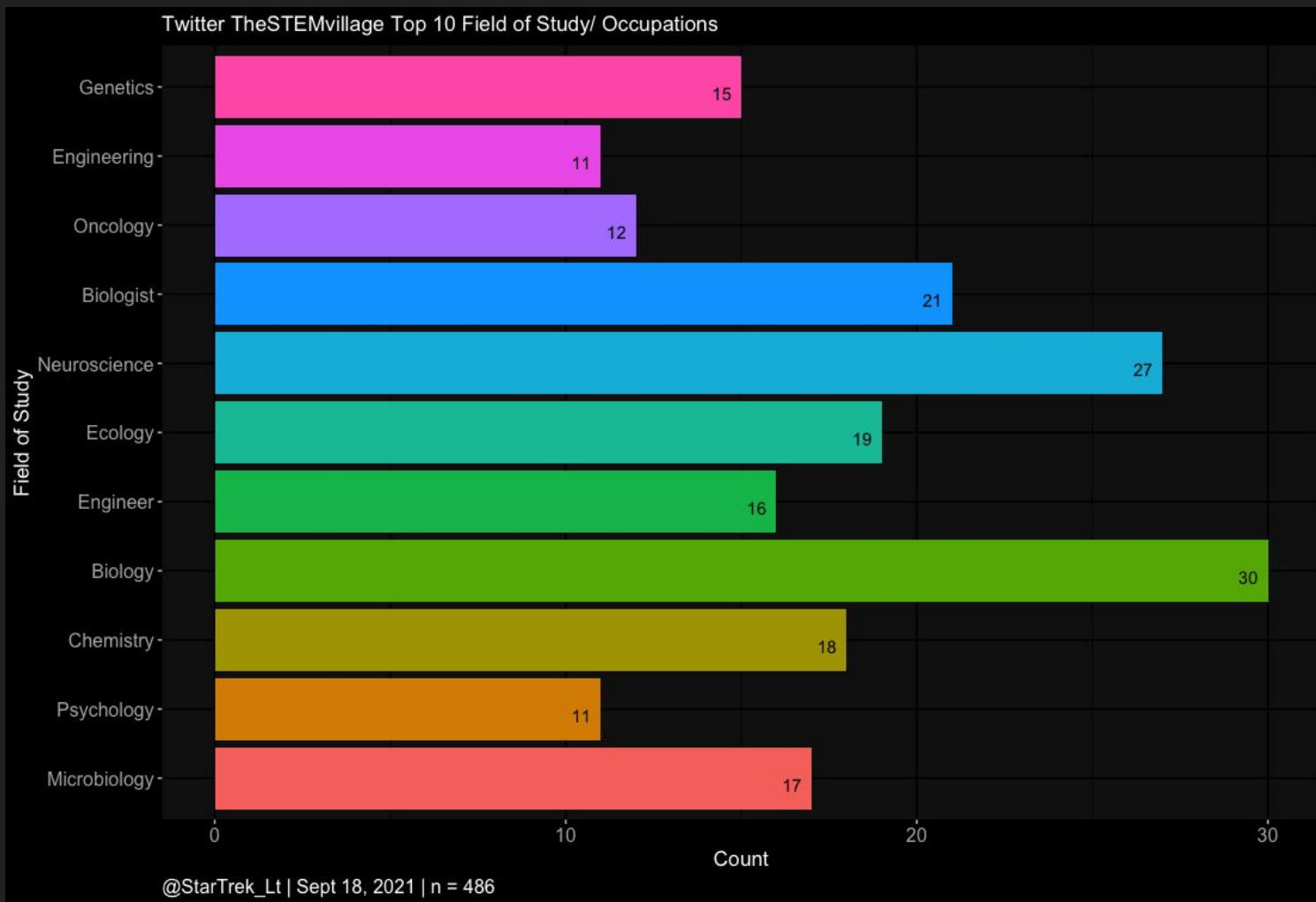
Minority Report

The next Twitter account I searched for was TheSTEMvillage, which has 6683 followers. The STEM village is broad in scope of who falls in the categories, the goal was to get a basic count on how many LGBTQ people are in what types of Sciences. I searched through accounts that had the inclusion criteria of pride flags, pronouns and required text on what field of study / occupation the account was part of. Only accounts with pride flags excluding ones with the word 'Ally' associated were included in the first data collection. Accounts with 'They' pronouns were counted in the Transgender column regardless of a Transgender flag emoji.

I started with 580 accounts initially in my first pass, based on pride flags, but the second pass excluded 92 accounts, resulting in a sample of 486 accounts. From this sample of 486, 99 accounts were counted as Transgender (20.37%).
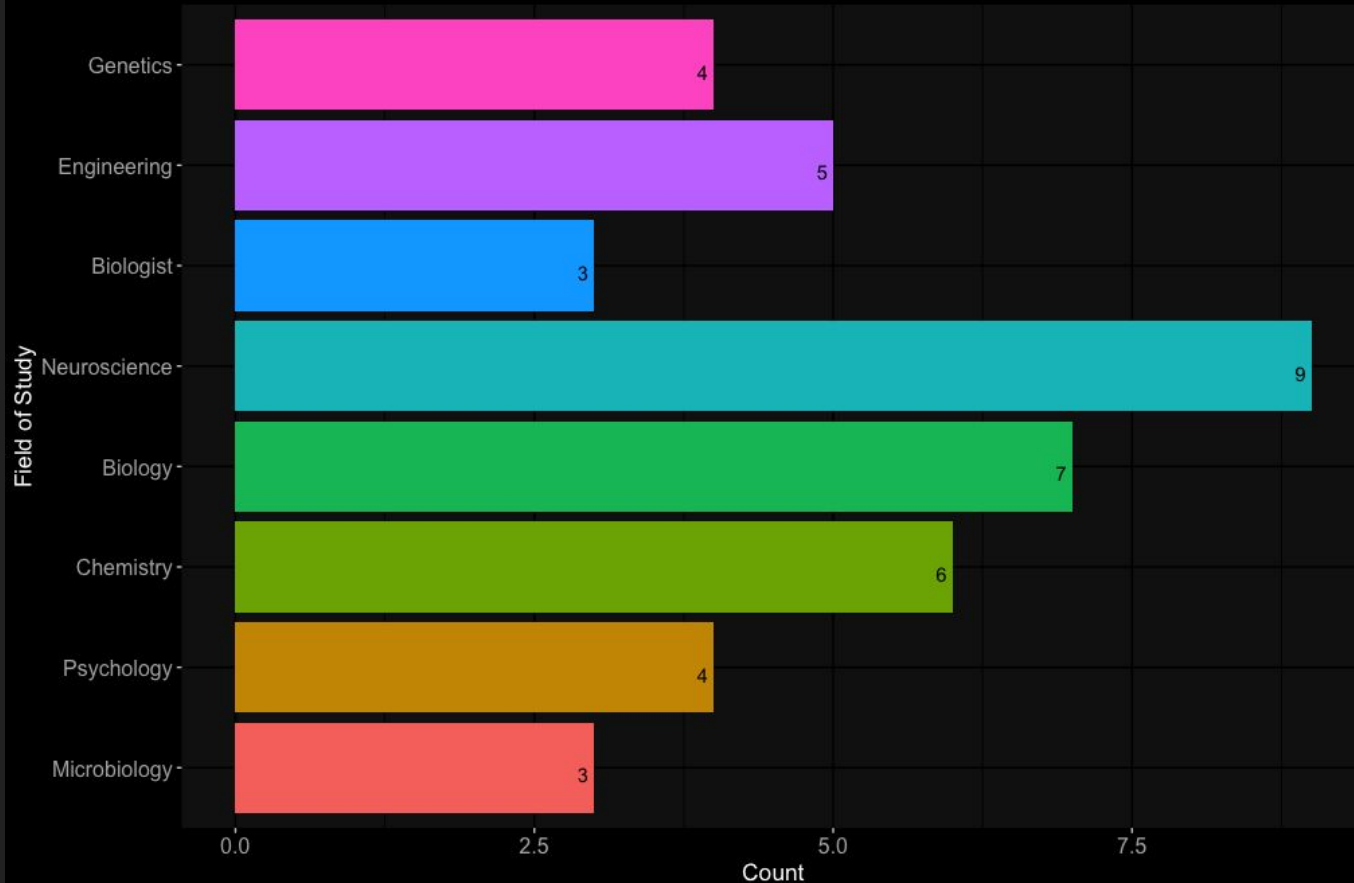
- 4 accounts were Software Developers, 1 Transgender Software Developer out of the 4
- 6 accounts were related to Data, only 1 Transgender Data Scientist
- 4 accounts for Bioinformatician, none of which were counted as Transgender
- 6 accounts were Public Health, only 1 Transgender Public Health

What fields of Science are these LGBTQ scientists in ?

Twitter TheSTEMvillage Top 10 Field of Study/ Occupations

@StarTrek_Lt | Sept 18, 2021 | n = 486

Twitter TheSTEMvillage Transgender people in STEM Occupations
Transgender count > 2 by field of study

Out of 486, Transgender Scientists are counted the highest in the Neuroscience field

@StarTrek_Lt | Sept 18, 2021 | n = 486.
Note: Accounts with They prounouns were included regardless of Trans pride flag

Minorities in Science is just part of the missing narrative

error:Narrative not found

Part of the missing narrative is the data itself, as Transgender people around the world are often not counted in demographic surveys. In 2018, Canada included in a national survey of the LGBTQ community, specifically including Non-Binary people. It is estimated 75,000, or 0.24%, of Canadians aged 15 and older are Transgender (StatsCan, 2020).

The datasets often used in daily Data Science work and toy data have no Transgender people. Gender is still represented as binary.

Transgender people clearly exist but lack representation, the first time I learned that there were Transgender Software Developers was in the PyCon 2020 online Conference. On Twitter, most of the Transgender people I know are Game Developers and few are in Data Science related fields.

(StatsCan, 2020) https://www150.statcan.gc.ca/n1/daily-quotidien/200909/dq200909a-eng.htm

Minority Narratives

Some possible ways to help have more minority narratives is to :

- Train / Mentor / Hire minorities, including Transgender people
- Use datasets that include gender minorities
- Use inclusive surveys that allow for gender minorities

```r
# A data frame with non-binary Gender categories

library(tidyverse)

LGBT_ = tribble(
  ~Gender, ~Count,
  "Female", 34,
  "Male", 67,
  "Non-Binary",7,
  "Trans-Female",5,
  "Trans-Male",6,
  "Prefer Not to Say",2
)
LGBT_
```

Gender	Count
<chr>	<dbl>
1 Female	34
2 Male	67
3 Non-Binary	7
4 Trans-Female	5
5 Trans-Male	6
6 Prefer Not to Say	2

Thank you SeptembRSE