NLP sentiment

May 12, 2021

```
[1]: #Analyze a web page for sentiment.
     #You can use Rvest and get_text to get the text information from the web page.
     #Compare two web pages such as:
     #www.sjsu.edu (Links to an external site.)
     #www.stanford.edu
```

```
[2]: library(rvest)
     library(xml2)
     library(magrittr)
     library(syuzhet)
```

```
Loading required package: xml2
```

```
[3]: url <- 'https://www.sjsu.edu/'
     sjsu_web <- read_html(url)
     nodes <- html_nodes(sjsu_web,"a")
     nodes
```

```
{xml_nodeset (144)}
 [1] <a class="o-emergency__link" href="http://www.sjsu.edu/healthadvisories/ ...
 [2] <a id="skiplink" href="#maincontent" class="show-for-sr">Skip to main co ...
 [3] <a class="o-title--global" href="/">San José State University</a>
 [4] <a class="amm-o-nav__top-link gtm-nav--global" href="/visit/index.php">< ...
 [5] <a class="amm-o-nav__top-link gtm-nav--global" href="https://www.sjsu.ed ...
 [6] <a class="amm-o-nav__top-link gtm-nav--global" href="http://giving.sjsu. ...
 [7] <a class="amm-o-nav__top-link"><span class="u-icon u-icon--hamburger u-c ...
 [8] <a class="amm-o-nav__heading gtm-nav--global" href="/visit/index.php">Vi ...
 [9] <a class="gtm-nav--global" href="https://www.sjsu.edu/soar/visitsus/visi ...
[10] <a class="gtm-nav--global" href="http://www.sjsu.edu/map">Maps</a>
[11] <a class="gtm-nav--global" href="https://www.sjsu.edu/parking/">Parking</a>
[12] <a class="gtm-nav--global" href="/visit/silicon-valley.php">Silicon Vall ...
[13] <a class="gtm-nav--global" href="https://hammertheatre.com/">Hammer Thea ...
[14] <a class="gtm-nav--global" href="/sjsulovessj/">SJSU Loves SJ</a>
[15] <a class="amm-o-nav__heading" href="/academics/index.php">Academics</a>
[16] <a class="gtm-nav--global" href="/academics/colleges-and-departments.php ...
[17] <a class="gtm-nav--global" href="https://catalog.sjsu.edu/content.php?ca ...
[18] <a class="gtm-nav--global" href="/academics/centers.php">Centers <br>and ...
```

```
[19] <a class="gtm-nav--global" href="/classes/calendar/index.php">Academic C ...
[20] <a class="gtm-nav--global" href="/classes/index.php">Classes</a>
...
```

[4]: `gettext(nodes)`

1. 'Health Advisories website' 2. 'Skip to main content' 3. 'San José State University' 4. 'Visit' 5. 'Apply' 6. 'Give' 7. 'Menu' 8. 'Visit' 9. 'Campus Tours' 10. 'Maps' 11. 'Parking' 12. 'Silicon Valley' 13. 'Hammer Theatre' 14. 'SJSU Loves SJ' 15. 'Academics' 16. 'Colleges and
Departments' 17. 'Majors and
Programs' 18. 'Centers
and Institutes' 19. 'Academic Calendar' 20. 'Classes' 21. 'King Library' 22. 'Admissions' 23. 'Tuition and Fees' 24. 'Housing' 25. 'Professional Education' 26. 'Parent and
Family Programs' 27. 'Campus Life' 28. 'Health and Wellness' 29. 'Safety' 30. 'SJSU Cares' 31. 'Events' 32. 'Traditions' 33. 'Student Alumni
Connection' 34. 'Research and
Innovation' 35. 'Office of

Research' 36. 'SJSU Research
Foundation' 37. 'Student-Faculty
Collaborations' 38. '<a class="gtm-nav–global" href="/research-and-innovation/become-a-research-pa a
Research Partner' 39. 'About' 40. 'Administration
and Leadership' 41. 'Facts and
Accomplishments' 42. 'Partnerships' 43. 'Transformation
Defined' 44. 'SJSU on Facebook' 45. 'SJSU on Twitter' 46. 'SJSU on LinkedIn' 47. 'SJSU on Instagram' 48. 'SJSU on YouTube' 49. 'Athletics' 50. 'Alumni Association' 51. 'Giving to SJSU' 52. 'Canvas' 53. 'one.SJSU' 54. 'Search' 55. 'Go toSJSU homepage.' 56. 'Visit' 57. 'Campus Tours' 58. 'Maps' 59. 'Parking' 60. 'Silicon Valley' 61. 'Hammer Theatre' 62. 'SJSU Loves SJ' 63. 'Academics' 64. 'Colleges and Departments' 65. 'Majors and Pro- grams' 66. 'Centers and Institutes' 67. 'Academic Calendar' 68. 'Classes' 69. 'King Library' 70. '<a href="https://www.sjsu.edu/admissions/"

class="gtm-nav–global-mobile">Admissions' 71. 'Tuition and Fees' 72. 'Housing' 73. 'Professional Education' 74. 'Parents and Family Programs' 75. 'Campus Life' 76. 'Health and Wellness' 77. 'Safety' 78. 'SJSU Cares' 79. 'Events' 80. 'Traditions' 81. 'Student Alumni Connection' 82. 'Research and Innovation' 83. 'Office of Research' 84. 'SJSU Research Foundation' 85. 'Student-Faculty Collabora-tions' 86. '<a class="gtm-nav–global-mobile" href="/research-and-innovation/become-a-research-partner.ph a Research Partner' 87. 'Athletics' 88. 'About' 89. 'Administration
and Leadership' 90. 'Facts and
Accomplishments' 91. 'Partnerships' 92. 'Transformation
Defined' 93. 'About' 94. '<a class="o-media___link" href="https://blogs.sjsu.edu/newsroom/2021/sjsu-highlights-its-own-women-leaders-in-celebration-of-womens-his Our Women Leaders During Women's History Month' 95. '<a class="o-media___link" href="https://blogs.sjsu.edu/newsroom/2021/lurie-college-case-study-illuminates-unequal-access-to-internet-in-ce College Case Study Illuminates Unequal Access to Internet in Cen-tral California Amid COVID-19' 96. 'Remembering Charles W. Davidson' 97. '<a class="o-media___link" href="https://blogs.sjsu.edu/president/2021/03/22/message-to-the-sjsu-community-regarding-anti-asian-american to the SJSU Community Regarding Anti-Asian American Racism' 98. '<a class="o-media___link" href="https://blogs.sjsu.edu/newsroom/2021/sjsu-looks-ahead-to-fall-semester-at-recent- Looks Ahead to Fall Semester at Recent Adapt Town Halls' 99. 'View All News' 100. '\n\t\t\t\t\t\t\t\t\t<div class="o-calendar___info">\n\t\t\t\t\t\t\t\t\t\t<img src="/_images/news/featured_calendar_default-spirit-m alt="Spartan Spirit Mark Logo." class="o-calendar___feature-image">\n\t\t\t\t\t\t\t\t\t\t\tEvent On\n\t\t\t\t\t\t\t\t\t\t\tMarch\n\t\t\t\t\t\t\t\t\t\t\t\t class="o-calendar___day">23\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t<p class="o-calendar___event-name u-bar u-bar–medium u-bar–sjsu-gold">\n\t\t\t\t\t\t\t\t\t\tFamilies Across Borders: A Live Connection\n\n\t\t\t\t\t\t\t\t\t\t</p>\n\t\t\t\t\t\t\t\t\t</div>\n\t\t\t\t\t\t\t 101. '\n\t\t

class="o-calendar___info">\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t\t<s class="show-for-sr">Event On\n\t\t\t\t\t\t\t\t\t\t\tMarch\n\t\t\t\t\t\t\t\t\t\t\t24\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t<p class="o-calendar___event-name u-bar u-bar–medium u-bar–sjsu-gold">\n\t\t\t\t\t\t\t\t\t\t\tBlack Student Support Group\n\t\t\t\t\t\t\t\t\t\t</p>\n\t\t\t\t\t\t\t\t\t\t</div>\n\t\t\t\t\t\t\t\t\t\t'
102. '\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t\t<s class="show-for-sr">Event On\n\t\t\t\t\t\t\t\t\t\t\tMarch\n\t\t\t\t\t\t\t\t\t\t\t25\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t<p class="o-calendar___event-name u-bar u-bar–medium u-bar–sjsu-gold">\n\t\t\t\t\t\t\t\t\t\t\tConnecting in College: Peers, Professional and Networking\n\t\t\t\t\t\t\t\t\t\t</p>\n\t\t\t\t\t\t\t\t\t\t</div>\n\t\t\t\t\t\t\t\t\t\t
103. '\n\t\t\t\t\t\t\t\t\t\t< class="o-calendar___info">\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t\t<s class="show-for-sr">Event On\n\t\t\t\t\t\t\t\t\t\t\tMarch\n\t\t\t\t\t\t\t\t\t\t\t27\n\t\t\t\t\t\t\t\t\t\t\n\t\t\t\t\t\t\t\t\t\t<p class="o-calendar___event-name u-bar u-bar–medium u-bar–sjsu-gold">\n\t\t\t\t\t\t\t\t\t\t\tHammer Theatre: New Ballet - Fast Forward\n\t\t\t\t\t\t\t\t\t\t</p>\n\t\t\t\t\t\t\t\t\t\t</div>\n\t\t\t\t\t\t\t\t\t\t</
104. 'View All Events'
105. 'Shaping the Future of Student Success' 106. '<a class="o-media___link" href="https://sjsu.zoom.us/webinar/register/WN_ZRjul3nKQ5CsKCw-jl2exQ?mkt_tok=NjYzLVVVLUS05OTgA Celebration of Research' 107. 'The Accidental Geographer' 108. 'SJSU on Facebook'
109. 'SJSU on Twitter' 110. 'SJSU on LinkedIn'
111. 'SJSU on Instagram'
112. 'SJSU on YouTube'
113. 'One Washington Square
San José, CA 95192' 114. '408-924-1000' 115. 'Accessibility' 116. 'Accreditation' 117. 'Title IX' 118. 'Diversity' 119. 'PDF Viewer' 120. 'Privacy' 121. 'Business' 122. '<a href="https://www.sjsu.edu/education/"

class="gtm-footer–link">Education' 123. 'Engineering' 124. 'Graduate Studies' 125. 'Health and Human Sciences' 126. 'Humanities and the Arts' 127. 'Professional and Global Education' 128. 'Science' 129. 'Social Sciences' 130. 'A-Z Index' 131. 'Annual Security Report [pdf]' 132. 'Bookstore' 133. 'Calendars' 134. 'Careers and Jobs' 135. 'Catalog' 136. 'King Library' 137. 'Parking and Maps' 138. 'Contact Form' 139. 'Directory' 140. 'Doing Business with SJSU' 141. 'Emergency Info' 142. 'Report a Web Problem' 143. 'Report a Title IX Complaint' 144. 'Last Updated Mar 25, 2021'

[5]: `html_attr(nodes,'href')`

1. 'http://www.sjsu.edu/healthadvisories/' 2. '#maincontent' 3. '/' 4. '/visit/index.php'
5. 'https://www.sjsu.edu/admissions/' 6. 'http://giving.sjsu.edu' 7. NA
8. '/visit/index.php' 9. 'https://www.sjsu.edu/soar/visitsus/visitsjsu/index.html'
10. 'http://www.sjsu.edu/map' 11. 'https://www.sjsu.edu/parking/'
12. '/visit/silicon-valley.php' 13. 'https://hammertheatre.com/' 14. '/sjsulovessj/'
15. '/academics/index.php' 16. '/academics/colleges-and-departments.php'
17. 'https://catalog.sjsu.edu/content.php?catoid=2&navoid=96' 18. '/academics/centers.php'
19. '/classes/calendar/index.php' 20. '/classes/index.php' 21. 'http://library.sjsu.edu/'
22. 'https://www.sjsu.edu/admissions/' 23. '/tuition-and-fees/index.php' 24. '/housing-op-tions/index.php' 25. 'https://www.sjsu.edu/extend/index.html?' 26. '/parent-and-family-pro-grams/index.php' 27. '/campus-life/' 28. '/campus-life/health-and-wellness.php' 29. '/cam-pus-life/safety.php' 30. '/sjsucares/' 31. '/campus-life/events.php' 32. '/campus-life/traditions.php'
33. '/campus-life/sac.php' 34. '/research-and-innovation/index.php' 35. '/research'
36. '/researchfoundation' 37. '/research-and-innovation/student-faculty-collaborations.php'
38. '/research-and-innovation/become-a-research-partner.php' 39. '/about/index.php'
40. '/about/administration-and-leadership.php' 41. '/facts-and-accomplishments/index.php'
42. '/about/partnerships.php' 43. '/transform/' 44. 'http://www.facebook.com/sanjosestate'

45. 'https://twitter.com/sjsu' 46. 'http://www.linkedin.com/company/san-jose-state-university'
47. 'http://www.instagram.com/sjsu' 48. 'http://www.youtube.com/user/sjsu'
49. 'http://www.sjsuspartans.com' 50. 'http://alumni.sjsu.edu' 51. 'http://giving.sjsu.edu'
52. 'https://sjsu.instructure.com' 53. 'https://one.sjsu.edu' 54. 'https://sjsu.edu/search/index.html'
55. '/index.php' 56. '/visit/index.php' 57. 'https://www.sjsu.edu/soar/visitsus/visitsjsu/index.html'
58. 'http://www.sjsu.edu/map' 59. 'https://www.sjsu.edu/parking/'
60. '/visit/silicon-valley.php' 61. 'https://hammertheatre.com/' 62. '/sjsulovessj/'
63. '/academics/index.php' 64. '/academics/colleges-and-departments.php'
65. 'https://catalog.sjsu.edu/content.php?catoid=2&navoid=96' 66. '/academics/centers.php'
67. '/classes/calendar/index.php' 68. '/classes/index.php' 69. 'http://library.sjsu.edu/'
70. 'https://www.sjsu.edu/admissions/' 71. '/tuition-and-fees/index.php' 72. '/housing-options/index.php' 73. 'https://www.sjsu.edu/extend/index.html?' 74. '/parent-and-family-programs/index.php' 75. '/campus-life/' 76. '/campus-life/health-and-wellness.php' 77. '/campus-life/safety.php' 78. '/sjsucares/' 79. '/campus-life/events.php' 80. '/campus-life/traditions.php'
81. '/campus-life/sac.php' 82. '/research-and-innovation/index.php' 83. '/research' 84. '/researchfoundation' 85. '/research-and-innovation/student-faculty-collaborations.php' 86. '/research-and-innovation/become-a-research-partner.php' 87. 'https://sjsuspartans.com/'
88. '/about/index.php' 89. '/about/administration-and-leadership.php' 90. '/facts-and-accomplishments/index.php' 91. '/about/partnerships.php' 92. '/transform/' 93. '/about/'
94. 'https://blogs.sjsu.edu/newsroom/2021/sjsu-highlights-its-own-women-leaders-in-celebration-of-womens-histor
95. 'https://blogs.sjsu.edu/newsroom/2021/lurie-college-case-study-illuminates-unequal-access-to-internet-in-centr
96. 'https://blogs.sjsu.edu/president/2021/03/25/remembering-charles-w-davidson/'
97. 'https://blogs.sjsu.edu/president/2021/03/22/message-to-the-sjsu-community-regarding-anti-asian-american-r
98. 'https://blogs.sjsu.edu/newsroom/2021/sjsu-looks-ahead-to-fall-semester-at-recent-adapt-town-halls/'
99. 'http://blogs.sjsu.edu/newsroom/' 100. 'https://events.sjsu.edu/event/families_across_borders_a_live_conne
101. 'https://events.sjsu.edu/event/black_student_support_group'
102. 'https://events.sjsu.edu/event/connecting_in_college_peers_professional_networking'
103. 'https://events.sjsu.edu/event/l_fast_forward' 104. 'https://events.sjsu.edu/'
105. 'https://pages.sjsu.edu/choose-sjsu' 106. 'https://sjsu.zoom.us/webinar/register/WN_ZRjul3nKQ5CsKCw-jl
107. 'https://go.sjsu.edu/podcast' 108. 'http://www.facebook.com/sanjosestate'
109. 'https://twitter.com/sjsu' 110. 'http://www.linkedin.com/company/san-jose-state-university'
111. 'http://www.instagram.com/sjsu' 112. 'http://www.youtube.com/user/sjsu'
113. 'https://goo.gl/maps/8PBZPkKH15WVnq396' 114. 'tel:4089241000'
115. 'https://www.sjsu.edu/accessibility' 116. 'https://www.sjsu.edu/wasc/'
117. 'https://www.sjsu.edu/titleix/' 118. 'https://www.sjsu.edu/diversity/'
119. 'https://get.adobe.com/reader/' 120. '/privacy/' 121. 'https://www.sjsu.edu/cob/'
122. 'https://www.sjsu.edu/education/' 123. '/engineering/' 124. 'https://www.sjsu.edu/cgs/'
125. 'https://www.sjsu.edu/chahs/' 126. 'https://www.sjsu.edu/humanitiesandarts/'
127. 'http://www.sjsu.edu/cpge' 128. 'https://www.sjsu.edu/science/'
129. 'https://www.sjsu.edu/socialsciences/' 130. 'http://www.sjsu.edu/siteindex'
131. 'http://www.sjsu.edu/clery/docs/SJSU-Annual-Security-Report.pdf'
132. 'http://www.spartanbookstore.com/' 133. 'https://www.sjsu.edu/calendars/'
134. '/careers/' 135. 'https://catalog.sjsu.edu/index.php?catoid=2'
136. 'http://library.sjsu.edu/' 137. 'https://www.sjsu.edu/parkingtransportationmaps/'
138. 'https://www.sjsu.edu/contact/index.html' 139. 'http://directory.sjsu.edu/'
140. '/about/doing-business-with-sjsu.php' 141. 'http://www.sjsu.edu/emergency'
142. '/it/services/web/forms/website-problem.php' 143. 'https://www.sjsu.edu/titleix/reporting-options.php'
144. 'https://a.cms.omniupdate.com/11/?skin=sjsu&account=sjsu&site=www&action=de&path=/index.php'

```r
[6]: read_html(url) %>% html_nodes('a') %>%
     html_attr(.,'href') -> links
     grep('sjsu.edu',links,invert=TRUE) %>%
     links[.] -> links
     grep('http',links) %>% links[.]
```

1. 'https://hammertheatre.com/' 2. 'http://www.facebook.com/sanjosestate'
3. 'https://twitter.com/sjsu' 4. 'http://www.linkedin.com/company/san-jose-state-university'
5. 'http://www.instagram.com/sjsu' 6. 'http://www.youtube.com/user/sjsu'
7. 'http://www.sjsuspartans.com' 8. 'https://sjsu.instructure.com'
9. 'https://hammertheatre.com/' 10. 'https://sjsuspartans.com/'
11. 'https://sjsu.zoom.us/webinar/register/WN_ZRjul3nKQ5CsKCw-jl2exQ?mkt_tok=NjYzLVVLUS05OTgAA
12. 'http://www.facebook.com/sanjosestate' 13. 'https://twitter.com/sjsu'
14. 'http://www.linkedin.com/company/san-jose-state-university' 15. 'http://www.instagram.com/sjsu'
16. 'http://www.youtube.com/user/sjsu' 17. 'https://goo.gl/maps/8PBZPkKH15WVnq396'
18. 'https://get.adobe.com/reader/' 19. 'http://www.spartanbookstore.com/'
20. 'https://a.cms.omniupdate.com/11/?skin=sjsu&account=sjsu&site=www&action=de&path=/index.php'

```r
[7]: sj<- html_text(html_nodes(read_html(url),'p'))
```

```r
[8]: sjsu <- get_sentences(sj)
```

```r
[9]: sjsu_vector <- get_sentiment(sjsu, method='syuzhet')
```

```r
[10]: sjsu_vector
```

1. 0.8 2. 0 3. 1.5 4. 0 5. 0.6 6. 1.5 7. 0 8. 0.5 9. 0.4 10. 0.1 11. 0 12. 0 13. 0.4 14. -0.5 15. 0 16. -0.4
17. 1.35 18. 0 19. 0.25 20. 0.8 21. 2 22. 0.75 23. 0 24. 3 25. 0.75 26. 4.05 27. 0 28. -1 29. -1.35 30. 0.6
31. 0

```r
[11]: plot(sjsu_vector, type='l')
```
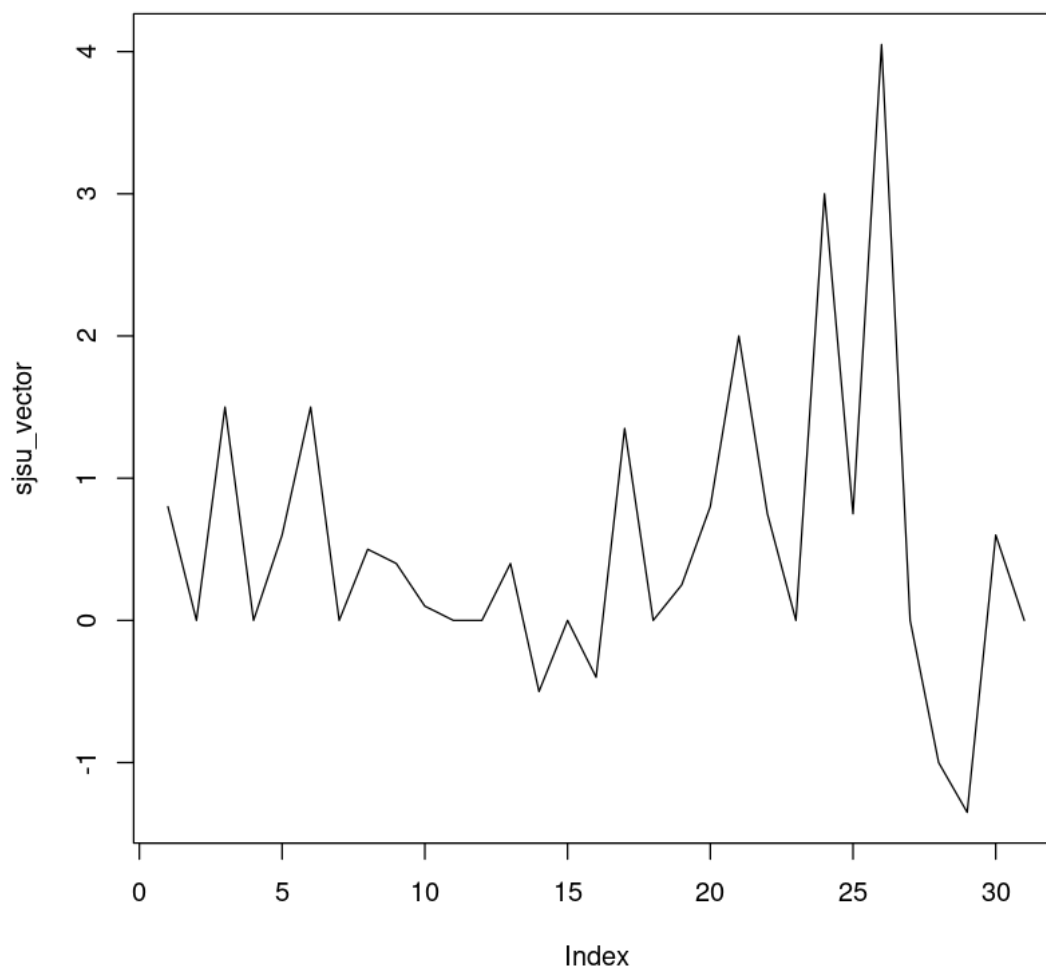
[12]:
```
sjsu_vector <- as.character(sjsu)

class(get_nrc_sentiment(sjsu))
```

Warning message:
"`filter_()` is deprecated as of dplyr 0.7.0.
Please use `filter()` instead.
See vignette('programming') for more help
This warning is displayed once every 8 hours.
Call `lifecycle::last_warnings()` to see where this warning was

generated."
Warning message:
"`group_by_()` is deprecated as of dplyr 0.7.0.

```
Please use `group_by()` instead.
See vignette('programming') for more help
This warning is displayed once every 8 hours.
Call `lifecycle::last_warnings()` to see where this warning was

generated."
Warning message:
"`data_frame()` is deprecated as of tibble 1.1.0.
Please use `tibble()` instead.
This warning is displayed once every 8 hours.
Call `lifecycle::last_warnings()` to see where this warning was

generated."
```

'data.frame'

[13]: `ns <- get_nrc_sentiment(sjsu_vector)`

[14]: `ns`

A data.frame: 31 × 10

anger	anticipation	disgust	fear	joy	sadness	surprise	trust	negative
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0
1	2	0	1	2	0	2	2	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	2	0
0	0	0	0	0	0	0	2	0
1	0	1	2	0	2	0	0	2
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	0	0	1
0	0	0	0	0	0	0	1	0
0	0	0	0	0	0	0	0	0
0	1	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	1	1	0
0	1	0	0	1	0	1	1	0
0	0	0	0	2	0	0	1	1
0	0	0	0	0	0	0	0	0
0	0	0	1	0	0	1	0	1
0	0	0	1	0	0	1	2	2
0	1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

```
[15]: plot(ns[,'fear'],type='l')
      lines(ns[,'positive'],col='blue')
      lines(ns[,'joy'],col='green')
```
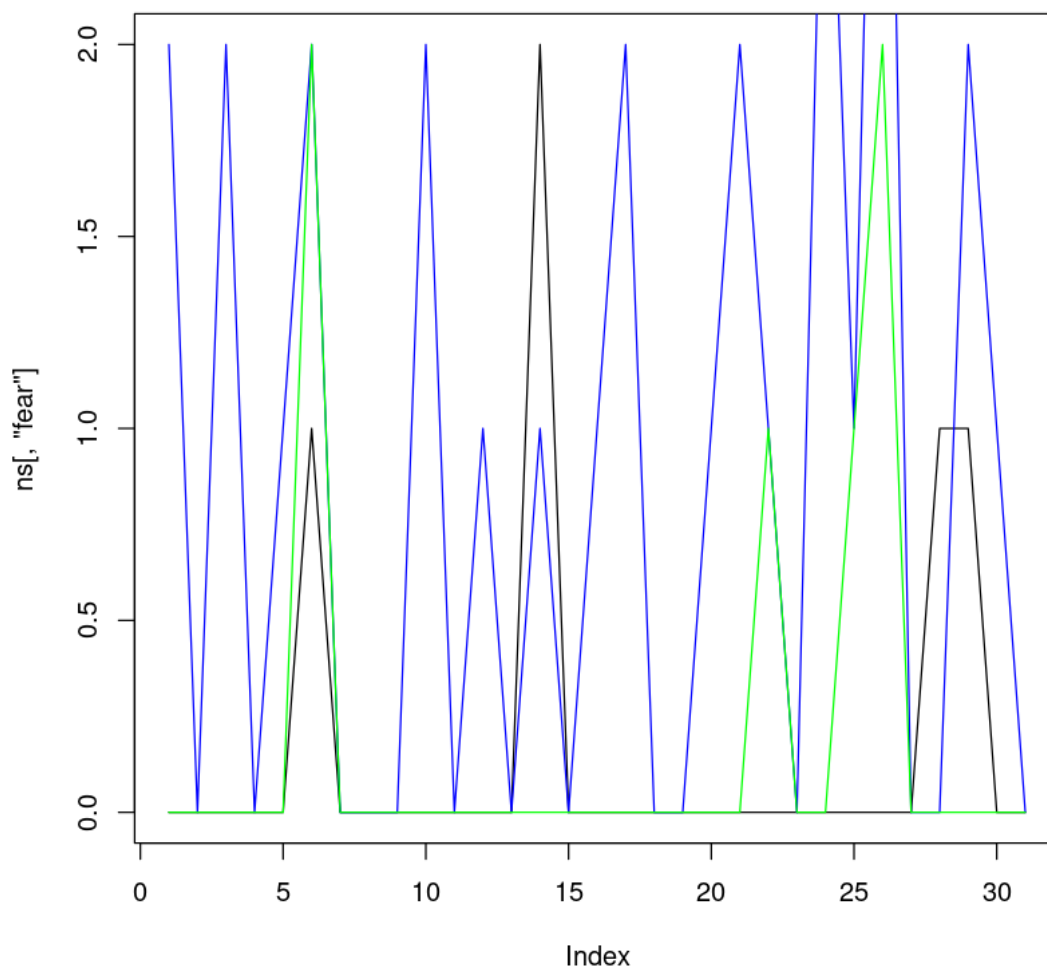
```
[16]: url1 <- 'https://www.stanford.edu/'
      standford_web <- read_html(url1)
      nodes <- html_nodes(standford_web,"a")
      nodes
      html_text(html_nodes(read_html(url1),'p'))
```

```
{xml_nodeset (122)}
 [1] <a id="skiplinks" href="#main-content" data-ga-category="Skip links" dat ...
 [2] <a href="https://www.stanford.edu/" class="su-brand" rel="home" id="head ...
 [3] <a href="https://www.stanford.edu/student-gateway/">Students</a>
 [4] <a href="https://www.stanford.edu/faculty-staff-gateway/">Faculty &amp;  ...
 [5] <a href="http://parents.stanford.edu/">Families</a>
 [6] <a href="https://visit.stanford.edu">Visitors</a>
```

```
 [7] <a href="http://alumni.stanford.edu/">Alumni</a>
 [8] <a href="https://healthalerts.stanford.edu/covid-19/">COVID Resources</a>
 [9] <a href="https://www.stanford.edu/news/">News</a>
[10] <a href="https://www.stanford.edu/events/">Events</a>
[11] <a href="https://www.stanford.edu/academics/">Academics</a>
[12] <a href="https://www.stanford.edu/research/">Research</a>
[13] <a href="https://www.stanford.edu/health-care/">Health Care</a>
[14] <a href="https://www.stanford.edu/campus-life/">Campus Life</a>
[15] <a href="https://www.stanford.edu/admission/">Admission</a>
[16] <a href="https://www.stanford.edu/about/">About</a>
[17] <a href="https://campus-map.stanford.edu/">Map</a>
[18] <a href="https://profiles.stanford.edu/">Profiles</a>
[19] <a href="#main-content" data-ga-action="Splash screen scroller">Explore  ...
[20] <a href="https://cardinalrecovery.stanford.edu/stages/">Stage 2</a>
...
```

1. '\n Other ways to search:\n Map\n Profiles\n ' 2. 'Stanford' 3. 'Explore Stanford' 4. 'Stanford is implementing a phased recovery of university operations. We are currently in Stage 2 of the restart process.' 5. 'The latest news from Stanford' 6. 'Science & Technology' 7. 'Social Sciences' 8. 'Science & Technology' 9. 'Science & Technology' 10. 'Science & Technology' 11. 'Medicine' 12. 'What's happening on campus' 13. 'lecture' 14. 'lecture' 15. 'seminar' 16. 'lecture' 17. 'Preparing students to make meaningful contributions to society as engaged citizens and leaders in a complex world' 18. 'Rich learning experiences that provide a broad liberal arts foundation and deep subject-area expertise' 19. 'Undergraduate Education' 20. 'Unsurpassed opportunities to participate in the advancement of entire fields of knowledge' 21. 'Graduate Education' 22. 'Continuing adult education, executive and professional programs, and programs for K-12 students' 23. 'Programs for Lifelong Learning' 24. '"Here at Stanford, people are constantly in conversation with one another. During my time as the director of the program in Feminist, Gender, and Sexuality Studies, I saw how faculty and students in different disciplines were incredibly engaged with their material and with one another. People are very intellectually generous here."' 25. 'Associate Professor of Music' 26. 'A culture of collaboration that drives innovative discoveries vital to our world, our health and our intellectual life' 27. 'Science & Technology' 28. 'Social Sciences' 29. 'Science & Technology' 30. 'Science & Technology' 31. 'Caring for people and advancing human health through innovative research, education and health care' 32. 'Our multidisciplinary approach delivers unparalleled care for each patient's unique needs, coordinating expertise with the most advanced technology.' 33. 'Stanford Health Care' 34. 'Comprised of our biomedical research, education and clinical enterprises, Stanford Medicine is leading a worldwide revolution in precision health.' 35. 'Stanford Medicine' 36. 'The only health care network in the Bay Area – and one of the few in the country – exclusively dedicated to pediatric and obstetric care' 37. 'Stanford Children\'s Health' 38. '"Move about the world and make as much of a difference and as much change as you can."' 39. 'Class of 2019, Linguistics and Iberian and Latin American Cultures' 40. 'A thriving community of creative and accomplished people from around the world' 41. 'A residential campus with diverse housing, exceptional dining, health care and over 600 student organizations' 42. 'Student Affairs' 43. 'A rich tradition of fostering creativity and a vibrant arts district on campus' 44. 'Stanford Arts' 45. '36 varsity sports, 33 club sports and state-of-the-art recreational facilities and fitness programs' 46. 'Go Stanford' 47. 'An extraordinary freedom of opportunity—to explore, to collaborate and to challenge yourself' 48. 'Admits and their families walk to attend Master Class sessions where

they gather to meet and learn from Stanford faculty.' 49. 'We look for distinctive students who exhibit an abundance of energy and curiosity in their classes, activities, projects, research and lives.' 50. 'Nearly 70% of undergrads receive financial aid. Generally, tuition is covered for families with incomes below $150,000.' 51. 'A place for learning, discovery, innovation, expression and discourse' 52. '©Copyright \n Stanford University.   \n \n Stanford,\n California\n 94305.\n '

```
[17]: stan <- html_text(html_nodes(read_html(url1),'p'))
```

```
[18]: stan <- get_sentences(stan)
```

```
[19]: stan
```

1. 'Other ways to search:\n Map\n Profiles' 2. 'Stanford' 3. 'Explore Stanford' 4. 'Stanford is implementing a phased recovery of university operations.' 5. 'We are currently in Stage 2 of the restart process.' 6. 'The latest news from Stanford' 7. 'Science & Technology' 8. 'Social Sciences' 9. 'Science & Technology' 10. 'Science & Technology' 11. 'Science & Technology' 12. 'Medicine' 13. 'What\'s happening on campus' 14. 'lecture' 15. 'lecture' 16. 'seminar' 17. 'lecture' 18. 'Preparing students to make meaningful contributions to society as engaged citizens and leaders in a complex world' 19. 'Rich learning experiences that provide a broad liberal arts foundation and deep subject-area expertise' 20. 'Undergraduate Education' 21. 'Unsurpassed opportunities to participate in the advancement of entire fields of knowledge' 22. 'Graduate Education' 23. 'Continuing adult education, executive and professional programs, and programs for K-12 students' 24. 'Programs for Lifelong Learning' 25. '"Here at Stanford, people are constantly in conversation with one another.' 26. 'During my time as the director of the program in Feminist, Gender, and Sexuality Studies, I saw how faculty and students in different disciplines were incredibly engaged with their material and with one another.' 27. 'People are very intellectually generous here."' 28. 'Associate Professor of Music' 29. 'A culture of collaboration that drives innovative discoveries vital to our world, our health and our intellectual life' 30. 'Science & Technology' 31. 'Social Sciences' 32. 'Science & Technology' 33. 'Science & Technology' 34. 'Caring for people and advancing human health through innovative research, education and health care' 35. 'Our multidisciplinary approach delivers unparalleled care for each patient\'s unique needs, coordinating expertise with the most advanced technology.' 36. 'Stanford Health Care' 37. 'Comprised of our biomedical research, education and clinical enterprises, Stanford Medicine is leading a worldwide revolution in precision health.' 38. 'Stanford Medicine' 39. 'The only health care network in the Bay Area – and one of the few in the country – exclusively dedicated to pediatric and obstetric care' 40. 'Stanford Children\'s Health' 41. '"Move about the world and make as much of a difference and as much change as you can."' 42. 'Class of 2019, Linguistics and Iberian and Latin American Cultures' 43. 'A thriving community of creative and accomplished people from around the world' 44. 'A residential campus with diverse housing, exceptional dining, health care and over 600 student organizations' 45. 'Student Affairs' 46. 'A rich tradition of fostering creativity and a vibrant arts district on campus' 47. 'Stanford Arts' 48. '36 varsity sports, 33 club sports and state-of-the-art recreational facilities and fitness programs' 49. 'Go Stanford' 50. 'An extraordinary freedom of opportunity—to explore, to collaborate and to challenge yourself' 51. 'Admits and their families walk to attend Master Class sessions where they gather to meet and learn from Stanford faculty.' 52. 'We look for distinctive students who exhibit an abundance of energy and curiosity in their classes, activities, projects, research and lives.' 53. 'Nearly 70% of undergrads receive financial aid.' 54. 'Generally, tuition is covered for families with incomes below $150,000.' 55. 'A place for learning, discovery, innovation, expression and discourse' 56. '©Copyright \n Stanford University.' 57. ' \n \n Stanford,\n California\n 94305.'

```
[31]: stan_vector <- get_sentiment(stan)
```

```
[32]: stan_vector
```

1. 0 2. 0 3. 0 4. 0.85 5. 0 6. 0 7. 0.1 8. 0 9. 0.1 10. 0.1 11. 0.1 12. 0 13. 0.25 14. 0 15. 0 16. 0 17. 0
18. 1.35 19. 3 20. 0 21. 3 22. 0 23. 1.2 24. 0.8 25. 0 26. 1.65 27. 0.75 28. 1 29. 2.3 30. 0.1 31. 0 32. 0.1
33. 0.1 34. 1.5 35. 2.95 36. 1 37. 1.05 38. 0 39. 1.5 40. 0 41. 0 42. 0 43. 2.6 44. 1.75 45. 0 46. 2.5
47. 0 48. 2.2 49. 0 50. 1.75 51. 1.4 52. 1.6 53. 1 54. 0 55. 2.15 56. 0.6 57. 0
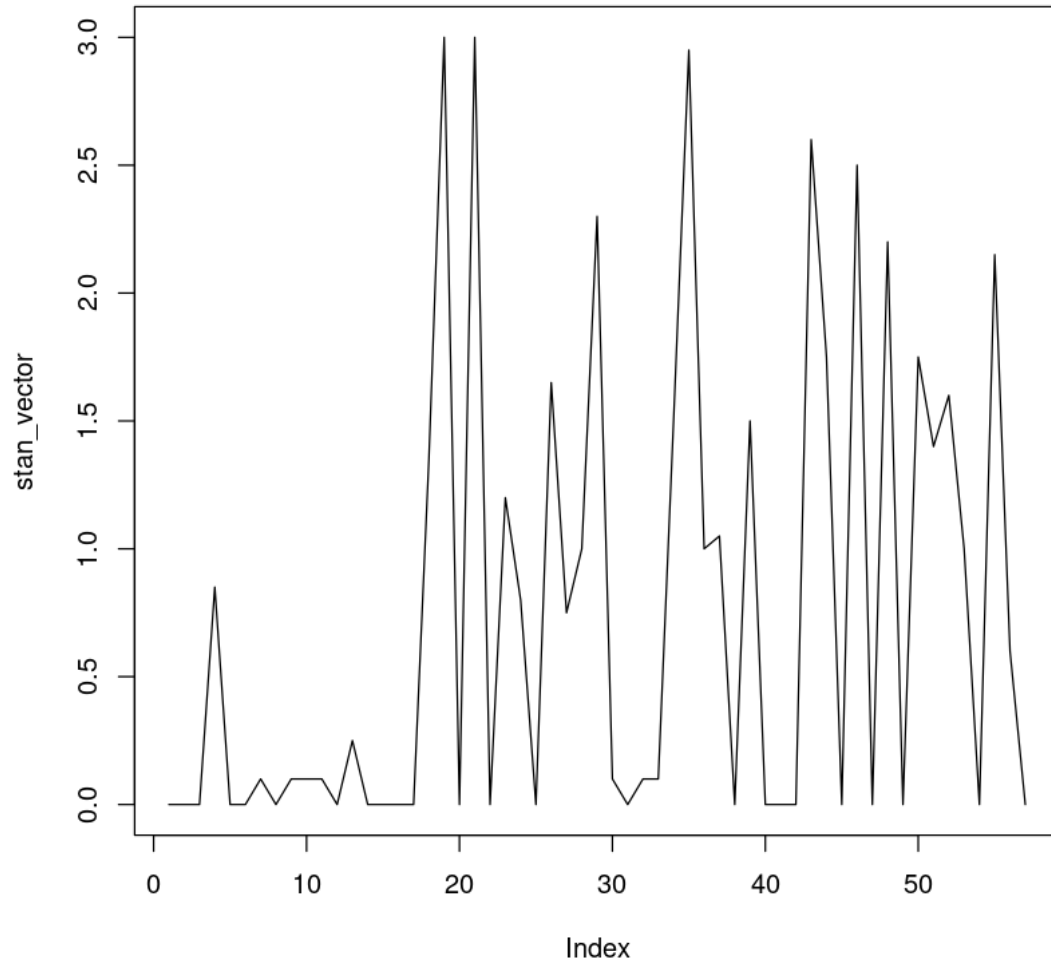
```
[42]: stan_vector <- as.character(stan_vector)
      class(get_nrc_sentiment(stan))
```
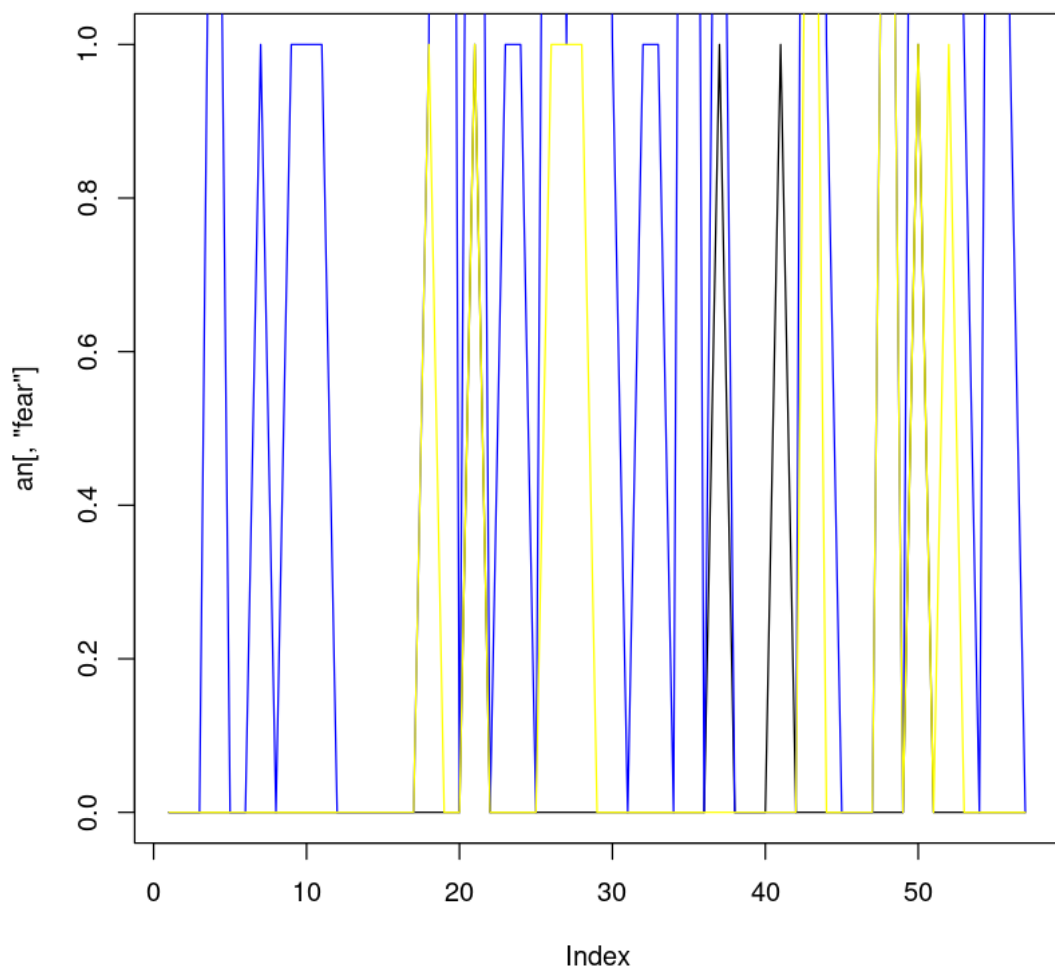
'data.frame'

```
[43]: an<- get_nrc_sentiment(stan)
      an
```

	anger <dbl>	anticipation <dbl>	disgust <dbl>	fear <dbl>	joy <dbl>	sadness <dbl>	surprise <dbl>	trust <dbl>	negative <dbl>
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	1	0	0	1	0	0	1	0
	0	0	0	0	0	0	0	2	2
	0	0	0	0	0	0	0	0	0
	0	1	0	1	1	0	0	1	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	1	0
	0	2	0	0	1	0	0	3	0
	0	0	0	0	1	0	0	1	0
A data.frame: 57 × 10
	0	0	0	0	1	1	0	2	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	1	1	0
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	1	1	0	1	0	1	1	1	1
	0	0	0	0	0	0	0	0	0
	0	1	0	0	0	0	0	0	0
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	0	0	0	1	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0
	1	2	0	1	1	0	0	1	1
	0	0	0	0	0	0	0	1	0

```
[44]: plot(stan_vector,type="l")
```



```
[45]: plot(an[,'fear'],type='l')
      lines(an[,'positive'],col='blue')
      lines(an[,'joy'],col='yellow')
```