

Portfolio

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Table of contents

0.1	About	1
0.2	Modeling surface composition of Lake Michigan sand dunes . . .	1
0.3	Spotify song data analysis: Classifying song genre and predicting song popularity	2
0.4	Predicting sales conversion from user data	2
0.5	PCA Analysis of Lake Michigan Sand Dunes	2

0.1 About

I'm Jack Krebsbach, and I am currently pursuing a degree in Mathematics with a concentration in Statistics at Hope College in Holland, MI. I use data analysis and statistical learning methods to solve problems. I also enjoy learning about software development.

This is my portfolio showcasing various machine learning, data science, and data analysis problems I have worked on over the years.

0.2 Modeling surface composition of Lake Michigan sand dunes

```
library(tidymodels)
```

```
Registered S3 method overwritten by 'tune':
```

```
  method          from  
required_pkgs.model_spec parsnip
```

```
-- Attaching packages ----- tidymodels 0.1.4 --
```

v broom	1.0.1	v recipes	0.1.17
v dials	0.0.10	v rsample	0.1.0
v dplyr	1.1.1	v tibble	3.2.1
v ggplot2	3.3.5	v tidyr	1.1.4
v infer	1.0.0	v tune	0.1.6

```

v modeldata 0.1.1      v workflows 0.2.3
v parsnip    0.1.7      v workflowsets 0.1.0
v purrr      0.3.4      v yardstick 0.0.8

-- Conflicts ----- tidymodels_conflicts() --
x purrr::discard() masks scales::discard()
x dplyr::filter()  masks stats::filter()
x dplyr::lag()     masks stats::lag()
x recipes::step()  masks stats::step()
* Use tidymodels_prefer() to resolve common conflicts.

# To prefer functions from the tidymodels namespace
tidymodels_prefer()
library(tidyverse)

-- Attaching packages ----- tidyverse 1.3.2 --
v readr 2.1.3      v forcats 0.5.1
v stringr 1.4.0

-- Conflicts ----- tidyverse_conflicts() --
x readr::col_factor() masks scales::col_factor()
x purrr::discard()     masks scales::discard()
x dplyr::filter()      masks stats::filter()
x stringr::fixed()     masks recipes::fixed()
x dplyr::lag()         masks stats::lag()
x readr::spec()        masks yardstick::spec()

```

0.3 Spotify song data analysis: Classifying song genre and predicting song popularity

0.4 Predicting sales conversion from user data

0.5 PCA Analysis of Lake Michigan Sand Dunes