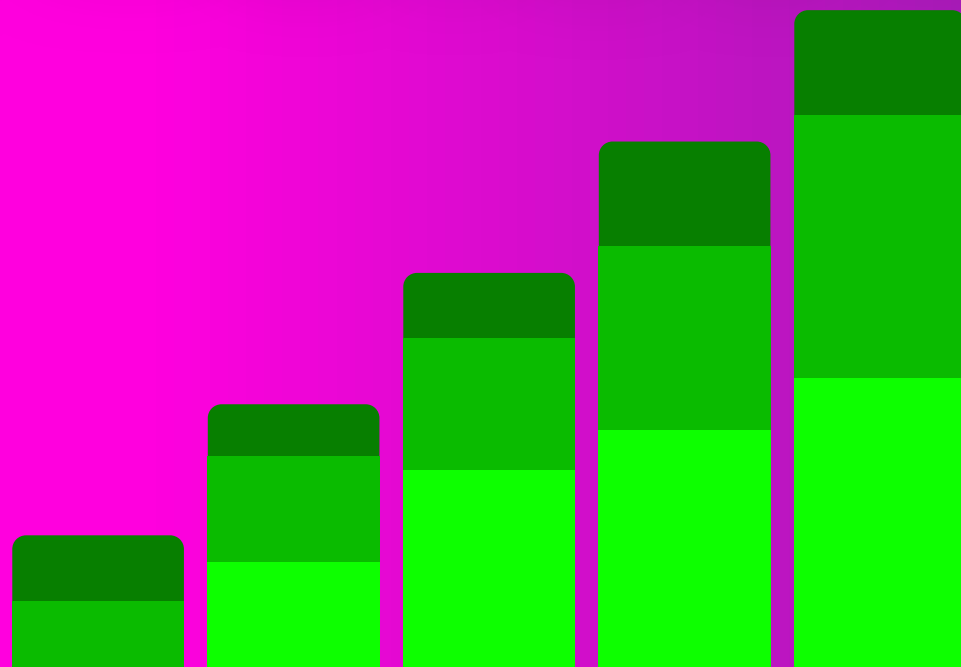


TOP 50

DATA ANALYST PORTFOLIO PROJECTS



ANDREW MADSON

Excel

PROJECT

Marketing ROI
Analysis

SKILLS

Pivot tables,
formulas

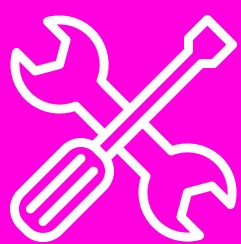
RESOURCES

"Excel Dashboards and Reports for
Dummies" by Alexander, M.,

Chandoo Excel Tutorials

GETTING STARTED

Analyze marketing spend data to calculate
ROI. Use pivot tables to summarize data
and formulas to calculate ROI.



Excel

PROJECT

Supply Chain Optimization

SKILLS

Solver, data validation

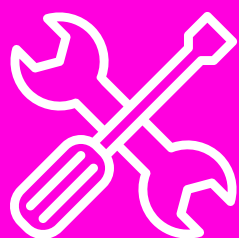
RESOURCES

"Excel Data Analysis For Dummies" by Nelson, S.,

Excel Easy Tutorials

GETTING STARTED

Develop a model to optimize supply chain operations. Use Solver to find the optimal solution and data validation to ensure data integrity.



Excel

PROJECT

HR Analytics -
Employee Attrition

SKILLS

Pivot tables,
conditional
formatting

RESOURCES

"Excel Formulas & Functions For Dummies"
by Bluttman, K.,

ExcellsFun YouTube Channel

GETTING STARTED

Analyze employee data to understand
attrition rates. Use pivot tables to group
data and conditional formatting to
highlight key findings.



Excel

PROJECT

Product Pricing
Strategy

SKILLS

What-if Analysis,
Data Tables

RESOURCES

"Excel 2019 Power Programming with VBA"
by Walkenbach, J.,

MrExcel's Excel Tutorials

GETTING STARTED

Analyze different pricing strategies and
their impact on sales and profits. Use
What-if Analysis and Data Tables to
compare different scenarios.



Excel

PROJECT

Customer Lifetime
Value Analysis

SKILLS

Formulas, Pivot
Tables

RESOURCES

"Microsoft Excel 2019 Data Analysis and
Business Modeling" by Winston, W.,

Excel Easy Tutorials

GETTING STARTED

Analyze customer data to calculate
Customer Lifetime Value. Use formulas to
calculate CLTV and pivot tables to
summarize data.



Excel

PROJECT

Sales Forecasting

SKILLS

Pivot tables,
forecasting functions

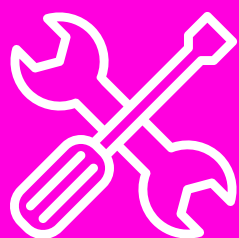
RESOURCES

"Excel 2019 All-in-One For Dummies" by
Harvey, G.,

Excel Jet Tutorials

GETTING STARTED

Analyze historical sales data to forecast
future sales. Use pivot tables to summarize
data and Excel's built-in forecasting
functions to predict trends.



Excel

PROJECT Employee Scheduling

SKILLS

Conditional
formatting,
optimization

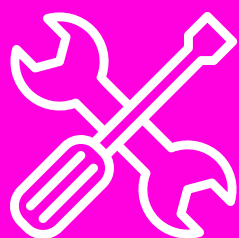
RESOURCES

"Excel 2019 Bible" by Alexander, M.,

Contextures Excel Tips

**GETTING
STARTED**

Create an employee scheduling system.
Use conditional formatting to highlight
scheduling conflicts and Excel's Solver tool
to optimize shifts.



Excel

PROJECT

Financial Budget
Tracking

SKILLS

Data visualization,
pivot tables,
formulas

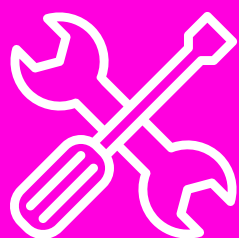
RESOURCES

"Excel Formulas & Functions For Dummies"
by Bluttman, K.,

ExcellsFun YouTube Channel

GETTING STARTED

Develop a system to track personal or
business finances. Use formulas to
calculate totals and pivot tables to
summarize data.



Excel

PROJECT

Customer
Segmentation

SKILLS

Pivot tables,
conditional
formatting

RESOURCES

"Microsoft Excel 2019 Data Analysis and
Business Modeling" by Winston, W.,

Excel Easy Tutorials

GETTING STARTED

Analyze customer data to identify distinct
customer segments. Use pivot tables to
group data and conditional formatting to
highlight key findings.



Excel

PROJECT

Inventory
Management

SKILLS

Conditional
formatting, data
validation, VLOOKUP

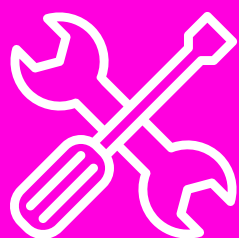
RESOURCES

"Excel 2019: From Beginner to Advanced"
by Pichler, B.,

MrExcel's Excel Tutorials

GETTING STARTED

Create an inventory management system.
Use data validation to ensure data
integrity, XLOOKUP to retrieve
information, and conditional formatting to
highlight low stock levels.



SQL

PROJECT

Customer
Segmentation

SKILLS

SQL querying, data
manipulation

RESOURCES

"SQL in 10 Minutes, Sams Teach Yourself"
by Forta, B.,

W3Schools SQL Tutorial

GETTING STARTED

Analyze customer data to identify distinct
customer segments. Use SQL queries to
group data based on different
characteristics.



SQL

PROJECT

E-commerce
Database Analysis

SKILLS

SQL querying, joins,
aggregation

RESOURCES

"Learning SQL" by Beaulieu, A.,

Khan Academy SQL Course

GETTING STARTED

Analyze an e-commerce database to extract insights about sales, customer behavior, and product performance. Use joins to combine data and aggregation functions to summarize it.



SQL

PROJECT

Employee
Performance
Tracking

SKILLS

SQL querying,
window functions,
case statements

RESOURCES

"SQL Cookbook" by Molinaro, A.,

Mode Analytics SQL Tutorial

GETTING STARTED

Analyze an employee database to track performance over time. Use window functions to calculate running totals and case statements to categorize data.



SQL

PROJECT

Real Estate Market
Analysis

SKILLS

SQL querying, data
manipulation,
subqueries

RESOURCES

"Head First SQL" by Beighley, L.,
[SQLZoo Tutorials](#)

GETTING STARTED

Analyze a real estate database to
understand market trends. Use subqueries
to handle complex data manipulation
tasks.



SQL

PROJECT

Hospital
Management System
Analysis

SKILLS

SQL querying, data
manipulation, stored
procedures

RESOURCES

"Murach's MySQL" by Joel Murach,

Coursera SQL Specialization

GETTING STARTED

Analyze a hospital management system database to extract insights about patient data, doctor performance, and resource allocation. Use stored procedures to automate common tasks.



SQL

PROJECT

Movie Database
Analysis

SKILLS

SQL querying, joins,
aggregation

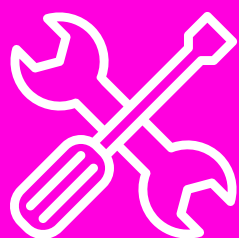
RESOURCES

"SQL: The Ultimate Beginner's Guide to
Learn SQL Programming Step by Step" by
Clark, R.,

Codecademy SQL Course

GETTING STARTED

Analyze a movie database to extract
insights about genres, directors, and
ratings. Use joins to combine data and
aggregation functions to summarize it.



SQL

PROJECT Library Management System Analysis

SKILLS SQL querying, data manipulation, stored procedures

RESOURCES [SQLBolt Interactive SQL Tutorial](#)

GETTING STARTED Analyze a library management system database to extract insights about book loans, member activity, and resource allocation. Use stored procedures to automate common tasks.



SQL

PROJECT

Hotel Booking
Analysis

SKILLS

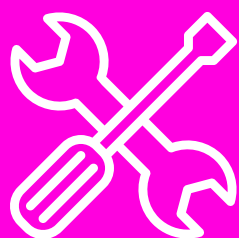
SQL querying,
window functions,
case statements

RESOURCES

"SQL Cookbook: Query Solutions and
Techniques for All SQL Users" by Molinaro,
A.

GETTING STARTED

Analyze a hotel booking database to
understand booking trends and patterns.
Use window functions to calculate running
totals and case statements to categorize
data.



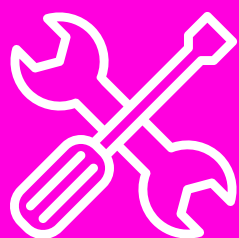
SQL

PROJECT Retail Sales Analysis

SKILLS SQL querying, data manipulation, subqueries

RESOURCES "SQL for Data Analytics" by Valluru, U., DataCamp SQL Courses

GETTING STARTED Analyze a retail database to understand sales trends and product performance. Use subqueries to handle complex data manipulation tasks.



SQL

PROJECT

University
Management System
Analysis

SKILLS

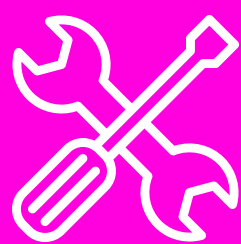
SQL querying, data
manipulation, stored
procedures

RESOURCES

"Learn SQL" by Meier, U., Kaggle SQL
Course

GETTING STARTED

Analyze a university management system
database to extract insights about student
performance, course popularity, and
resource allocation. Use stored procedures
to automate common tasks.



Tableau

PROJECT

Dashboard for
COVID-19 Data

SKILLS

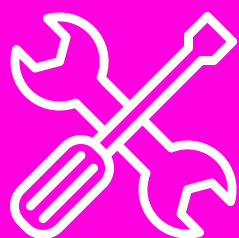
Data visualization,
interactive
dashboards

RESOURCES

"Mastering Tableau" by Brown, D., Tableau
Training Videos

GETTING STARTED

Create an interactive dashboard to
visualize COVID-19 data. Use Tableau's
mapping capabilities to show geographic
trends and filters to allow for interactive
exploration.



Tableau

PROJECT

Real Estate Market
Analysis

SKILLS

Data visualization,
mapping

RESOURCES

"Communicating Data with Tableau" by
Ben Jones, Tableau Public Gallery

GETTING STARTED

Analyze a real estate database to
understand market trends. Use Tableau's
data visualization capabilities to show
patterns in the data.



Tableau

PROJECT

Customer
Segmentation

SKILLS

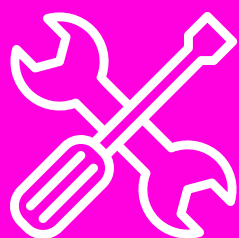
Data visualization,
calculated fields

RESOURCES

"Tableau Your Data!" by Murray, D.,
Tableau Official Tutorials

GETTING STARTED

Analyze customer data to identify distinct customer segments. Use calculated fields to create new metrics and Tableau's visualization capabilities to present your findings.



PowerBI

PROJECT Sales Performance
Dashboard

SKILLS Data visualization,
DAX formulas

RESOURCES "Pro Power BI Desktop" by Aspin, A., Power
BI Guided Learning

**GETTING
STARTED** Create a dashboard to track sales
performance. Use PowerBI's DAX formulas
to calculate key metrics and its
visualization capabilities to present them
effectively.



PowerBI

PROJECT

Financial Budget
Tracking

SKILLS

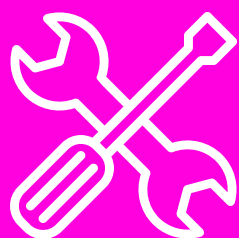
Data visualization,
measures

RESOURCES

"Supercharge Power BI" by Ferrari, A.,
Power BI Microsoft Learn

GETTING STARTED

Develop a system to track personal or
business finances. Use measures to
calculate totals and PowerBI's data
visualization capabilities to summarize and
present the data.



Tableau

PROJECT

Retail Sales
Dashboard

SKILLS

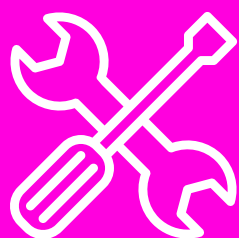
Data visualization,
interactive
dashboards

RESOURCES

"Mastering Tableau 2019.1" by Rock, M.,
Tableau Training Videos

GETTING STARTED

Create an interactive dashboard to visualize retail sales data. Use Tableau's mapping capabilities to show geographic trends and filters to allow for interactive exploration.



Tableau

PROJECT

University
Performance
Analysis

SKILLS

Data visualization,
calculated fields

RESOURCES

"Communicating Data with Tableau" by
Ben Jones, Tableau Public Gallery

GETTING STARTED

Analyze university data to identify
performance trends. Use calculated fields
to create new metrics and Tableau's
visualization capabilities to present your
findings.



Tableau

PROJECT

Airline Flight Data
Analysis

SKILLS

Data visualization,
mapping

RESOURCES

"Tableau Your Data!" by Murray, D.,
Tableau Official Tutorials

GETTING STARTED

Analyze airline flight data to understand
flight patterns and delays. Use Tableau's
mapping capabilities to visualize flight
paths.



PowerBI

PROJECT

HR Analytics
Dashboard

SKILLS

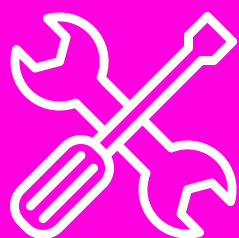
Data visualization,
DAX formulas

RESOURCES

"Beginning Power BI: A Practical Guide to Self-Service Data Analytics with Excel 2016 and Power BI Desktop" by Larsen, D.,
Power BI Guided Learning

GETTING STARTED

Create a dashboard to track HR metrics like employee attrition, performance, and diversity. Use PowerBI's DAX formulas to calculate key metrics and its visualization capabilities to present them effectively.



PowerBI

PROJECT

Social Media
Analytics

SKILLS

Data visualization,
measures

RESOURCES

"The Definitive Guide to DAX: Business Intelligence for Microsoft Power BI, SQL Server Analysis Services, and Excel" by Ferrari, A., Russo, M., Power BI Microsoft Learn

GETTING STARTED

Develop a system to track social media metrics. Use measures to calculate totals and PowerBI's data visualization capabilities to summarize and present the data.



Python

PROJECT

Sentiment Analysis
of Twitter Data

SKILLS

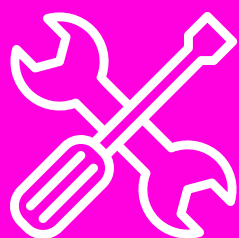
Python
programming, NLP

RESOURCES

"Natural Language Processing with Python"
by Bird, S., Klein, E., & Loper, E., Sentdex
Python Programming Tutorials

GETTING STARTED

Analyze sentiment of tweets about a
specific topic. Use Python's tweepy library
to access Twitter data and nltk library for
sentiment analysis.



Python

PROJECT Predictive Modeling

SKILLS Python
programming, scikit-learn

RESOURCES "Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow" by Géron, A.,
Scikit-Learn Tutorials

GETTING STARTED Use historical data to predict future outcomes. Clean and preprocess the data with pandas, then use scikit-learn to build and evaluate predictive models.



Python

PROJECT

Recommendation
Engine

SKILLS

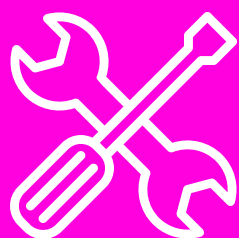
Python
programming,
Collaborative
Filtering

RESOURCES

"Python for Data Analysis" by McKinney,
W., DataCamp Python Track

GETTING STARTED

Build a recommendation engine for a
movie or e-commerce website. Use
collaborative filtering techniques to
provide recommendations based on
similar user behavior.



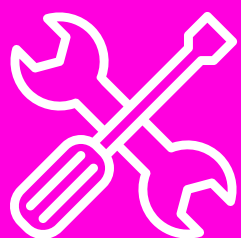
Python

PROJECT Time Series Analysis

SKILLS Python
programming,
pandas, statsmodels

RESOURCES "Python for Finance" by Hilpisch, Y.,
Machine Learning Mastery Tutorials

**GETTING
STARTED** Analyze time-series data like stock prices
or weather data. Use pandas for data
manipulation and statsmodels for time
series analysis.



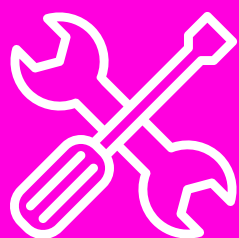
Python

PROJECT Image Classification

SKILLS Python
programming, Deep
Learning, Keras

RESOURCES "Deep Learning with Python" by Chollet, F.,
PyImageSearch Tutorials

**GETTING
STARTED** Build a deep learning model to classify
images. Use Python's keras library to build,
train, and evaluate a convolutional neural
network.



Python

PROJECT

Stock Market
Analysis

SKILLS

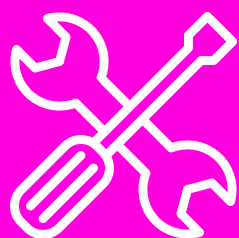
Python
programming,
pandas, matplotlib

RESOURCES

"Python for Finance: Mastering Data-Driven Finance" by Hilpisch, Y., Machine Learning Mastery Tutorials

GETTING STARTED

Analyze stock market data to understand market trends. Use pandas for data manipulation and matplotlib for data visualization.



Python

PROJECT

Weather Trend
Forecasting

SKILLS

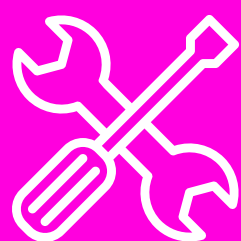
Python
programming, scikit-
learn, statsmodels

RESOURCES

"Python for Data Analysis" by McKinney,
W., DataCamp Python Track

GETTING STARTED

Use historical weather data to forecast
future trends. Clean and preprocess the
data with pandas, then use scikit-learn and
statsmodels for time series forecasting.



Python

PROJECT

Image Segmentation
for Medical Imaging

SKILLS

Python
programming, Deep
Learning, Keras

RESOURCES

"Deep Learning for Medical Image
Analysis" by Zhou, S. et al., PyImageSearch
Tutorials

GETTING STARTED

Build a deep learning model to segment
medical images. Use Python's keras library
to build, train, and evaluate a
convolutional neural network.



Python

PROJECT

Spam Detection

SKILLS

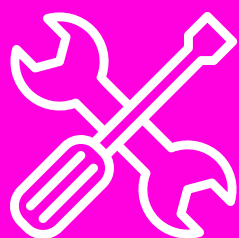
Python
programming, NLP,
scikit-learn

RESOURCES

"Natural Language Processing with Python
and spaCy" by Yuli Vasiliev,
PythonProgramming.net Tutorials

GETTING STARTED

Build a spam detection system for emails
or messages. Use Python's nltk and scikit-
learn libraries to preprocess text data and
build a classification model.



Python

PROJECT

Traffic Prediction
Model

SKILLS

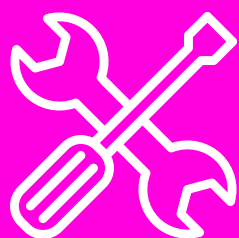
Python
programming, scikit-
learn, pandas

RESOURCES

"Python Machine Learning" by Raschka, S.,
Scikit-Learn Tutorials

GETTING STARTED

Use historical traffic data to predict future
traffic patterns. Clean and preprocess the
data with pandas, then use scikit-learn to
build and evaluate predictive models.



R

PROJECT

Customer
Segmentation

SKILLS

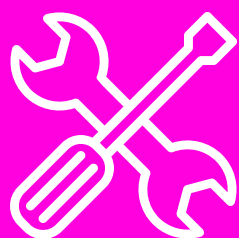
R programming,
dplyr, ggplot2

RESOURCES

"R for Data Science" by Wickham, H.,
Grolemund, G., DataCamp R Track

GETTING STARTED

Analyze customer data to identify distinct
customer segments. Use dplyr for data
manipulation and ggplot2 for visualization.



R

PROJECT Predictive Modeling

SKILLS R programming,
caret, randomForest

RESOURCES "The Elements of Statistical Learning" by
Hastie, T., Tibshirani, R., Friedman, J.,
Coursera Machine Learning with R

**GETTING
STARTED** Use historical data to predict future
outcomes. Clean and preprocess the data
with dplyr, then use caret and
randomForest to build and evaluate
predictive models.



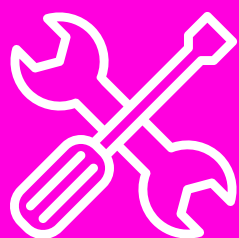
R

PROJECT Time Series Analysis

SKILLS R programming,
forecast, ggplot2

RESOURCES "Forecasting: Principles and Practice" by
Hyndman, R., Athanasopoulos, G.,
Forecasting with R

**GETTING
STARTED** Analyze time-series data like stock prices
or weather data. Use forecast for time
series analysis and ggplot2 for
visualization.



R

PROJECT

Text Mining of News Articles

SKILLS

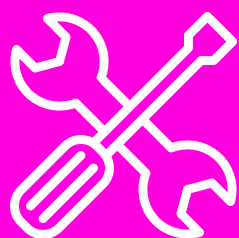
R programming, tm, wordcloud

RESOURCES

"Text Mining with R" by Silge, J., Robinson, D., Tidy Text Mining with R

GETTING STARTED

Analyze a collection of news articles to extract key themes. Use the tm package for text mining and wordcloud for visualization.



R

PROJECT

Sentiment Analysis
of Social Media

SKILLS

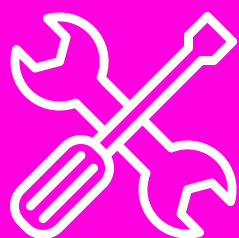
R programming,
tidytext, ggplot2

RESOURCES

"Text Mining with R" by Silge, J., Robinson,
D., Twitter Mining with R

GETTING STARTED

Analyze sentiment of social media posts
about a specific topic. Use the tidytext
package for sentiment analysis and ggplot2
for visualization.



R

PROJECT

Survival Analysis of Patient Data

SKILLS

R programming,
survival, survminer

RESOURCES

"Survival Analysis in R" by David Diez,
Survival Analysis with R

GETTING STARTED

Analyze patient data to estimate survival rates. Use the survival package for survival analysis and survminer for visualization.



R

PROJECT

Recommender
System for Movies

SKILLS

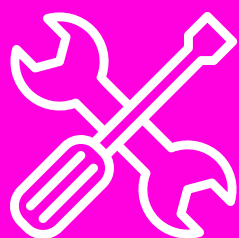
R programming,
recommenderlab,
ggplot2

RESOURCES

Recommender Systems in R

GETTING STARTED

Build a recommendation system for a movie website. Use the recommenderlab package to build the recommender system.



R

PROJECT Marketing Campaign Analysis

SKILLS R programming, dplyr, ggplot2

RESOURCES "Data Manipulation with R" by Spector, P., DataCamp R Track

GETTING STARTED Analyze marketing campaign data to understand its effectiveness. Use dplyr for data manipulation and ggplot2 for visualization.



R

PROJECT

Fraud Detection

SKILLS

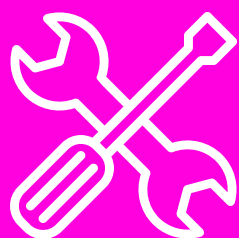
R programming,
randomForest,
ggplot2

RESOURCES

"Applied Predictive Modeling" by Kuhn, M.,
Johnson, K., Fraud Detection with R

GETTING STARTED

Analyze transaction data to detect
fraudulent activities. Use the
randomForest package to build the
detection model and ggplot2 for
visualization.



R

PROJECT

Social Network
Analysis

SKILLS

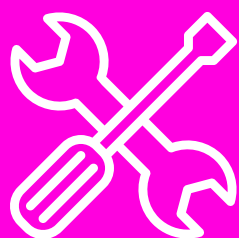
R programming,
igraph, ggraph

RESOURCES

"Statistical Analysis of Network Data with R" by Kolaczyk, E., Csárdi, G., Social Network Analysis with R

GETTING STARTED

Analyze a social network to understand the structure and relationship patterns. Use the igraph package for network analysis and ggraph for visualization.



HOORAY!

**You did it! Make
sure to like this
post and
download this
resource for
future reference.**

