Text

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- General Software
- Point Clouds

# General Introduction to CS and Programming

## Linux, VSCode, Git, Docker and Containerization

### The Missing Semester of Your CS Education

The Missing Semester of Your CS Education

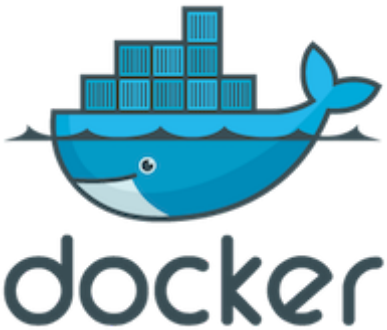
### Setting up VSCode for Data Science


text

https://code.visualstudio.com/docs/python/python-tutorial

- Data Science in VS Code tutorial
  text
- VS Code Remote Development
  text

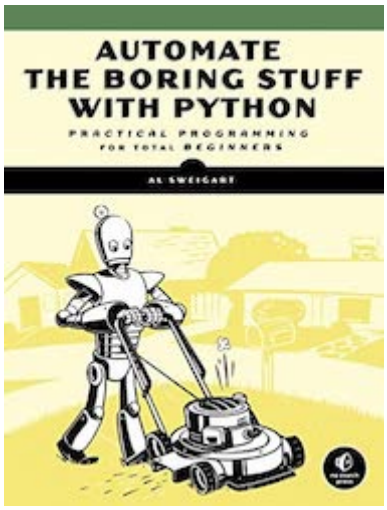
### Docker for Machine Learning




- Why use Docker containers for Machine Learning?
- Learn to build and deploy your distributed applications easily to the cloud with Docker
- Build and Run a Docker Container for your Machine Learning Model

## Introduction to Python Programming

### Automate the Boring Stuff




- Automate the Boring Stuff with Python

### Python for absolute beginners


- Python for absolute beginners in 2022 + Exercises (Video)

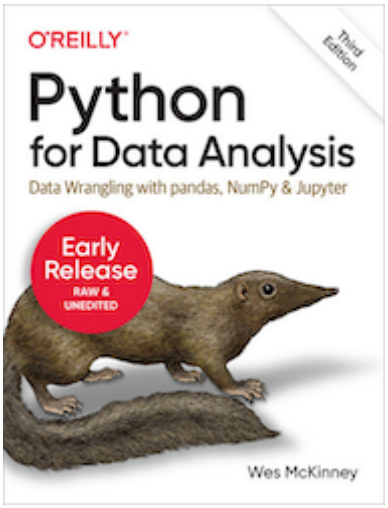
## Databases


- Introduction to PostgreSQL


- Introduction to SQLite

# Introduction to Machine Learning, Deep Learning, Explainable AI and Graph/3D Deep Learning

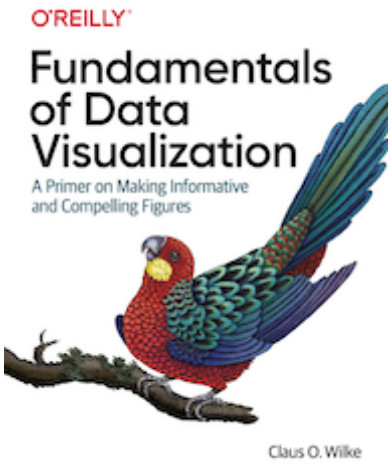
## Data Preprocessing in Python




- Python for Data Analysis, 3rd Edition

## Data Visualization

### Fundamentals of Data Visualization




- https://clauswilke.com/dataviz/

## Scientific Visualization - Python & Matplotlib


- https://github.com/rougier/scientific-visualization-book

## Streamlit

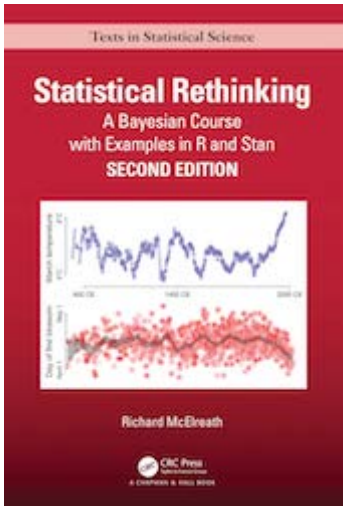
- https://streamlit.io/

## Quarto

https://quarto.org/

# Statistics

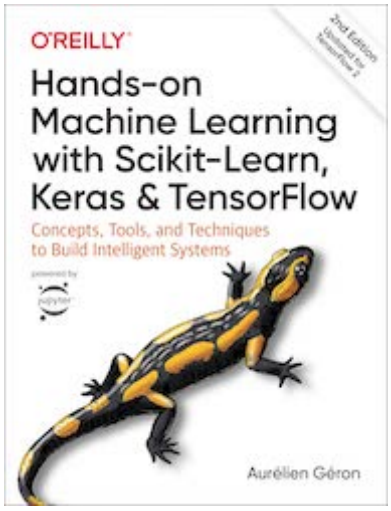
## Statistical Rethinking: A Bayesian Course with Examples in R and STAN




- Statistical Rethinking: A Bayesian Course with Examples in R and STAN
- https://fehiepsi.github.io/rethinking-numpyro/

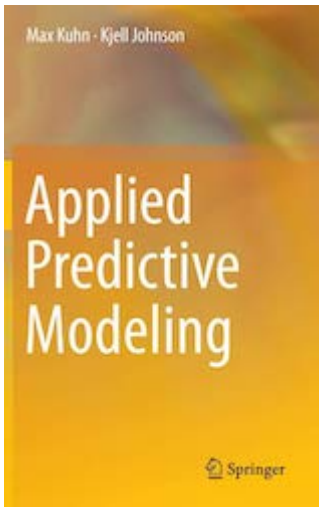
# Machine Learning

## Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition




- Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow, 2nd Edition

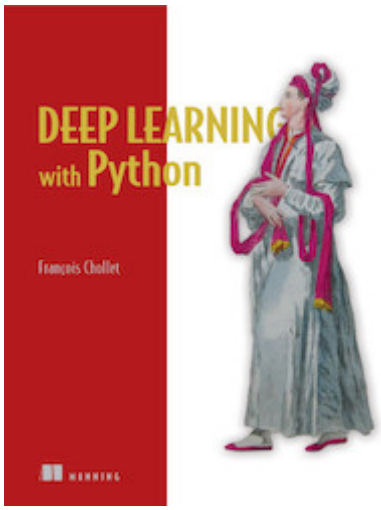
## Applied Predictive Modelling




- Applied Predictive Modelling

# Deep Learning

## Deep Learning with Python (keras)



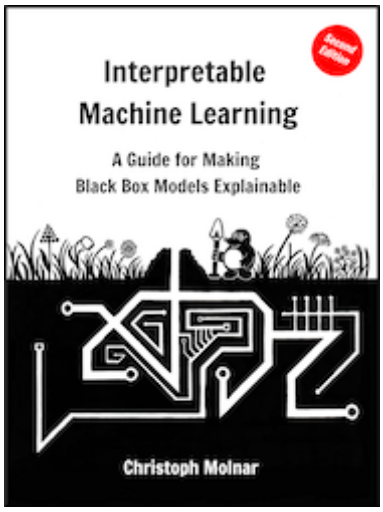

- Deep Learning with Python

## Practical Deep Learning Course (FastAI)

- fastai course

# Explainable AI

## Interpretable Machine Learning - A Guide for Making Black Box Models Explainable




- Interpretable Machine Learning A Guide for Making Black Box Models Explainable

### Alibi Explain

ALIBI
EXPLAIN

- Alibi Explain is an open source Python library aimed at machine learning model inspection and interpretation

### Shapley

SHAP

- An introduction to explainable AI with Shapley values

### InterpretML

InterpretML

- InterpretML Fit interpretable models. Explain blackbox machine learning.

## Hyperparameter tuning


https://optuna.org/
https://optuna.readthedocs.io/en/stable/tutorial/index.html

## 3D/Graph Deep Learning

- Geometric Deep Learning: Going beyond Euclidean data
- AMMI Course "Geometric Deep Learning" (Video)

# 3D Deep Learning and Machine Learning

## General Software

- Open3D: A Modern Library for 3D Data Processing
- PyG (PyTorch Geometric) is a library built upon PyTorch to easily write and train Graph Neural Networks (GNNs) for a wide range of applications related to structured data.
- CloudCompare 3D point cloud and mesh processing software

## Point Clouds

- Point Cloud Annotation Tool for Segmentation
- PointNet++ PointCloud Segmentation with PyG