Welcome!

Machine Learning with R

Basel R Bootcamp

May 2019

Welcome to the
Basel R Bootcamp!

Machine Learning with R

May, 2019

from swisskyline.ch

Schedule and Materials

Click the "Bootcamp running" link on our homepage!

www.therbootcamp.com

We teach R

Aim

The aim of this workshop is enable you to thoughtfully implement machine learning methods, using R, to make data-driven decisions.

What we will cover

1 - Intro to the **fundamentals** of ML.

2 - Intro to a few influential ML **models**.

3 - Intro to **using R** for ML.

4 - Opportunity to **learn by doing**.

5 - Opportunity for **discussion**.

What we will *NOT* **cover**

In depth, advanced treatment of ML.

from machinelearningplus.com

Schedule

We have an **ambitious schedule**!

- 2 days, 3-4 sessions per day, 1.5 - 2 hours per session, on a variety of topics.

- Each session contains a slide-based **introduction** and a hands-on **programming interactive or practical**

	Sat, 11 May	Sun, 12 May
0900	Welcome	Recap
0930	**What is ML**	**Optimization** +Practical
1045	**R for ML** +Interactive	
1200	*Lunch*	*Lunch*
1300	**Fitting** +Practical	**Features** +Practical
1500		**Models** +Practical
1530	**Prediction** +Practical	
1715		**Look ahead**
1800	Wrapup	*Apero*

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Introduction

30 - 45 minutes slide based introduction to help you understand the basic concepts, including:

1 - Theory
2 - Code examples
3 - Live demonstrations

All available online. Follow along, and don't worry about memorizing

This is a Link to our materials.

Be interactive! Ask questions!

from Freepik.com

from Freepik.com
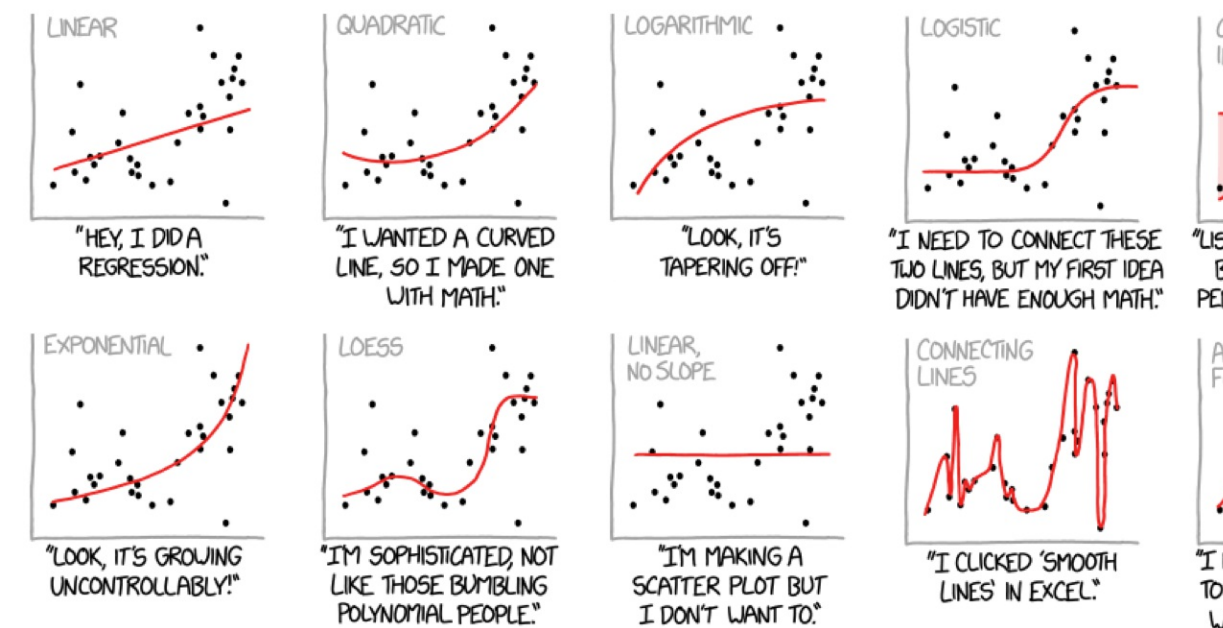
Practicals

Write your own R scripts!

- Anywhere from 10 ~ 30 programming tasks.

- Starts easy, gets progressively more challenging.

- Go at your own pace and finish as much as you can.

  - We have a diverse group with different backgrounds and interests, we love that!

- Be active! Ask questions!

- We'll give you all the answers later.

Fitting

Machine Learning with R

🕐 (https://therbootcamp.github.io/ML_2019May/) 🏠 (https://therboot

CURVE-FITTING METHODS
AND THE MESSAGES THEY SEND

LINEAR
"HEY, I DID A REGRESSION."

QUADRATIC
"I WANTED A CURVED LINE, SO I MADE ONE WITH MATH."

LOGARITHMIC
"LOOK, IT'S TAPERING OFF."

LOGISTIC
"I NEED TO CONNECT THESE TWO LINES, BUT MY FIRST IDEA DIDN'T HAVE ENOUGH MATH."

EXPONENTIAL
"LOOK, IT'S GROWING UNCONTROLLABLY!"

LOESS
"I'M SOPHISTICATED, NOT LIKE THOSE BUMBLING POLYNOMIAL PEOPLE."

LINEAR, NO SLOPE.
"I'M MAKING A SCATTER PLOT BUT I DON'T WANT TO."

CONNECTING LINES
"I CLICKED 'SMOOTH LINES' IN EXCEL."

1-1 Coaching

Learning a computer language is **hard**.

Take breaks when you need them, and don't get discouraged!

Sometimes, you may find yourself in need of some **intensive help**. That's ok! We're here to help!

At any time, you can **request a 15 minute 1-1 intensive** coaching session. We'll grab a coffee and work through it together.
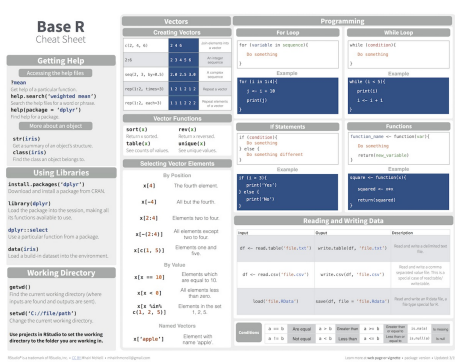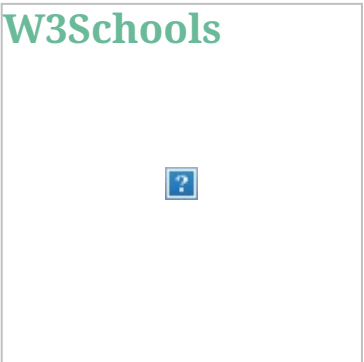

from geek-and-poke.com

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Cheatsheets

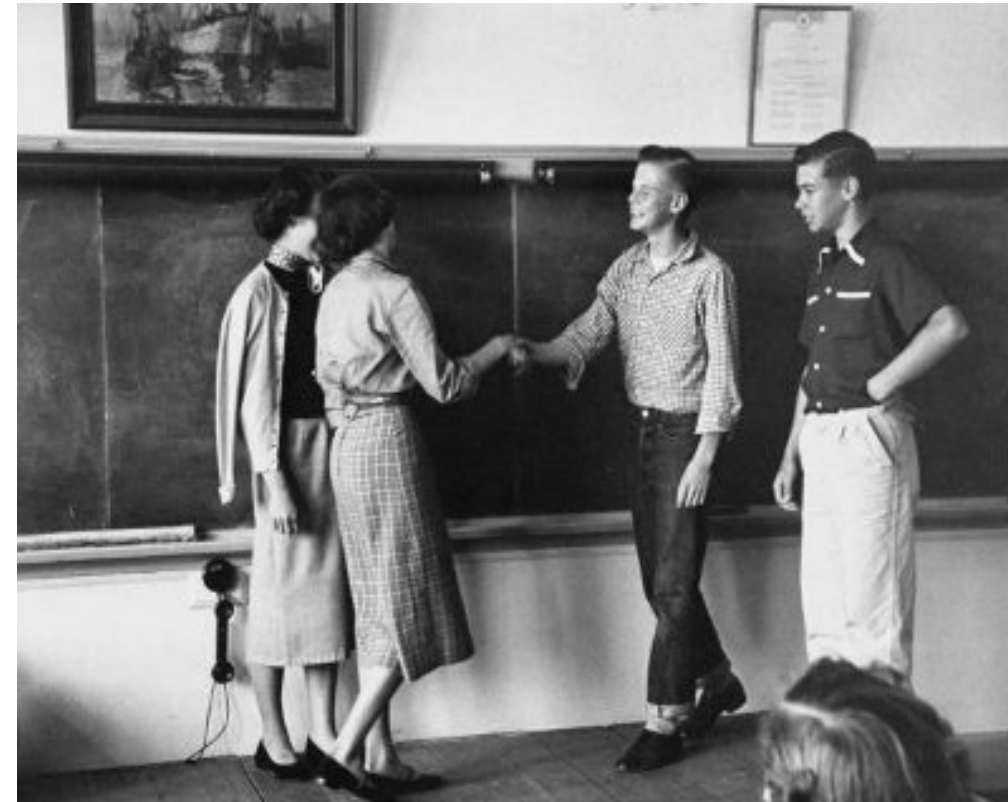| Base R	Data Import	Data Transformation	Caret
	W3Schools	W3Schools	W3Schools

Breaks

- Programming is exhausting! **Take breaks** when you need them!

- Help yourself to refreshments and as much coffee as you can drink.

- Lunch on your own or **walk with the group** to **Tibits** or the **Union Diner**

- Be back in the room at **13:00 sharp** so we can continue learning!

from Tibits.ch

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Introductions

1. What is your name?

2. Where are you from?

3. What is your current profession?

4. What is your programming experience with R and in general?

5. What is your experience with ML?

6. What would you most like to do with ML?

7. Coffee or tea?

8. Pizza or pasta?

9. Beer or wine?

10. Berlin or Paris?

artofmanliness.com

Schedule