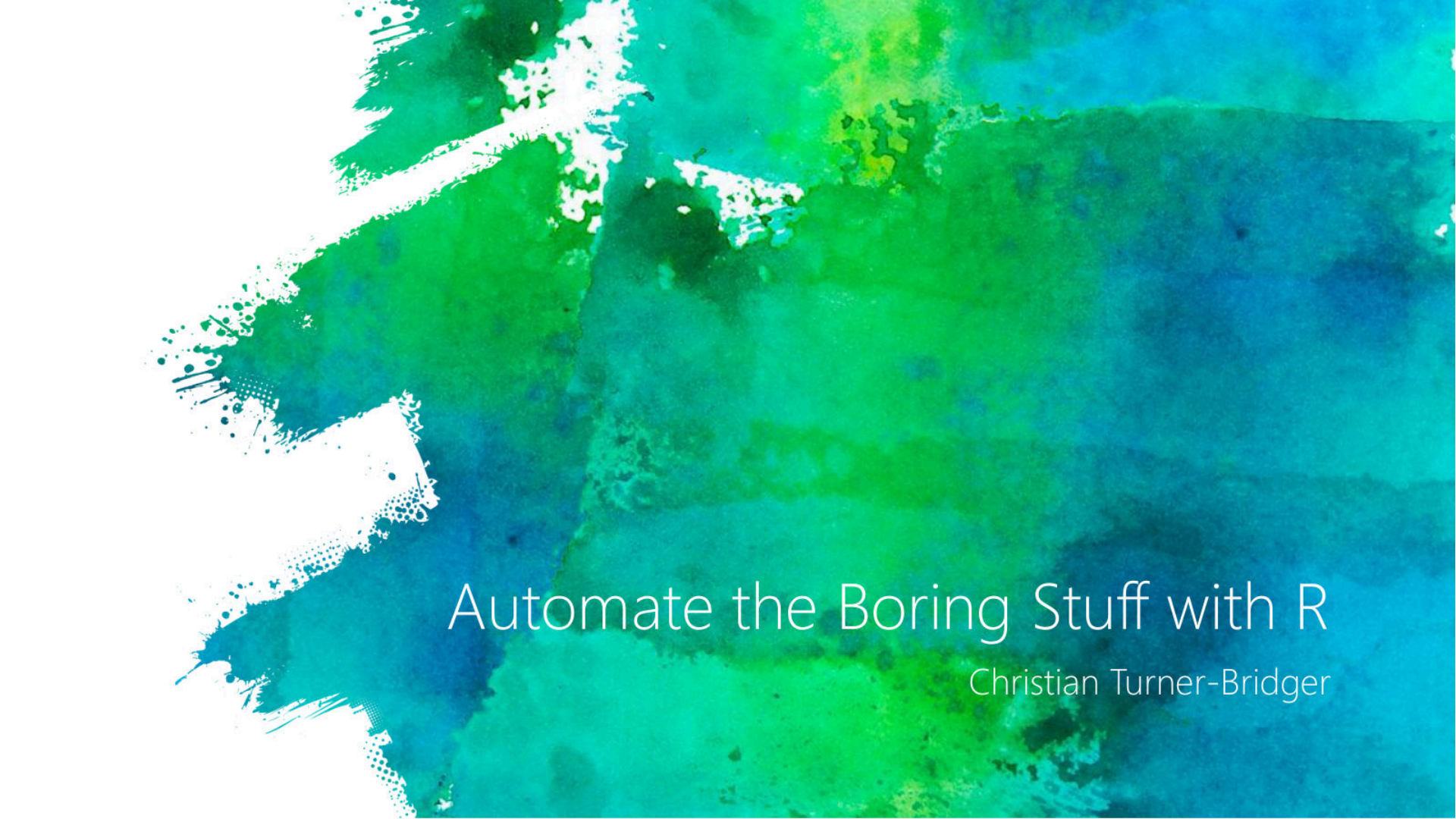


Let’s face the music and... ~~dance~~

AUTOMATE

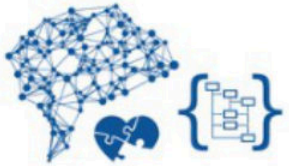

Automate the Boring Stuff with R
Christian Turner-Bridger


Philosophie docet
figure quid sit homo

Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility



Source: Future of Jobs Report, World Economic Forum

Structure.

- Background
- What I have automated
- Example (1): email a table of figures
- Example (2): formal report





80 million

Heathrow's passengers 2018

120

Front of House Staff

35

Unique Languages


Curator


Passenger Demand
Assisted Sale
Data Input
Data Storage
Data Retrieval
Reporting

What have I automated?



Reply Reply All Forward



Tue 29/10/2019 13:13

Christian Turner-Bridger

T3: Yesterday Reporting Summary (Monday 28/10/19)

To **T3 Team**

Cc Christian Turner-Bridger

If there are problems with how this message is displayed, click here to view it in a web browser.

Hi T3

£[redacted] assisted sales; £[redacted] shift average.

day	ddmm	Manager	name	shift	number.of.hourlies	value.of.hourlies	start.hour	end.hour	high.sales	comments
Mon	28-10	3	[redacted]		8	[redacted]	13	21	[redacted]	No OR Shift - admin team will add them in
Mon	28-10	3	[redacted]	1.125	9	[redacted]	12	21	[redacted]	
Mon	28-10	3	[redacted]	1	8	[redacted]	13	21	[redacted]	
Mon	28-10	3	[redacted]	1.125	9	[redacted]	12	21	[redacted]	
Mon	28-10	3	[redacted]	1.125	9	[redacted]	12	21	[redacted]	
Mon	28-10	3	[redacted]	1	8	[redacted]	9	17	[redacted]	

Centralised Admin

The process.

- Identify value
- Draft
- Get to work



The problems.

- It is overly difficult to format and send an email
- https://github.com/jennybc/send-email-with-r
- RDCOMClient by the Omega Project

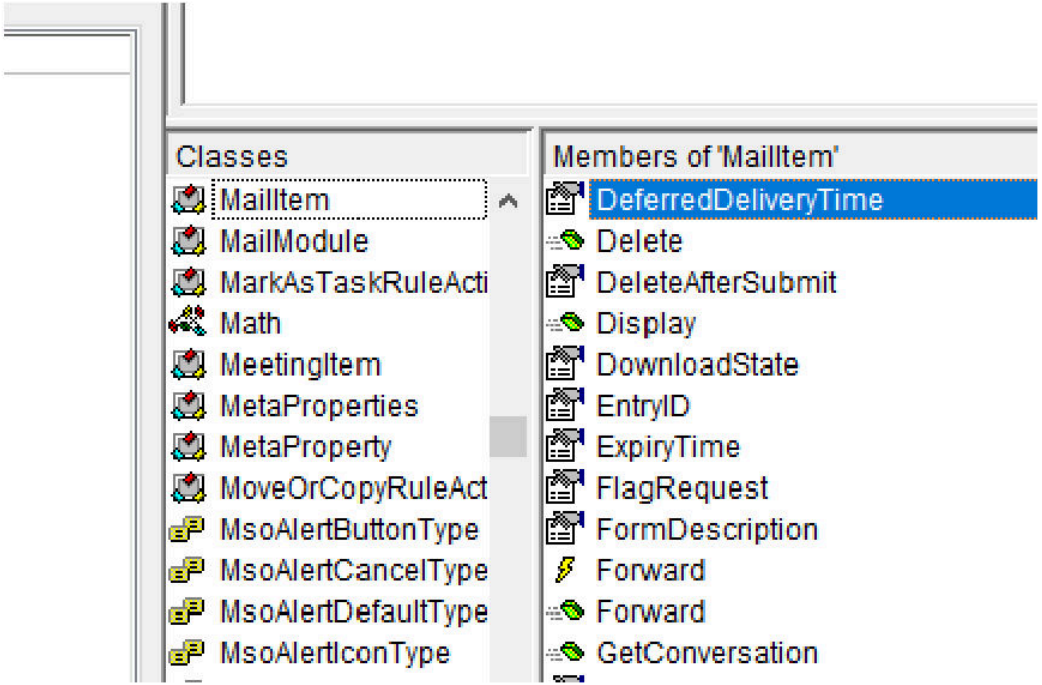


```
17  # Load the required packages
18  library(tidyverse)
19  library(htmlTable)
20  library(lubridate)
21  # install.packages("RDCOMClient", repos = "http://www.omegahat.net/R")
22  library("RDCOMClient")
23
24
```

RDCOMClient

- Allows R to act as a COM client and invoke methods '$' and access properties '[['
- How to find out what is available?




Classes
MailItem
MailModule
MarkAsTaskRuleActi
Math
MeetingItem
MetaProperties
MetaProperty
MoveOrCopyRuleAct
MsoAlertButtonType
MsoAlertCancelType
MsoAlertDefaultType
MsoAlertIconType
Members of 'MailItem'
DeferredDeliveryTime
Delete
DeleteAfterSubmit
Display
DownloadState
EntryID
ExpiryTime
FlagRequest
FormDescription
Forward
Forward
GetConversation

Content & Format.

- HTML & CSS
  - Define the document type & style
  - htmlTable package
  - Email signature
- Attach things



```
admin_rep_full_path <-
  "C:/Users/christian.turner-bri/Dropbox/Reach/rwd/daily_report/Admin.html"


## initiate COM api
OutApp <- COMCreate("Outlook.Application")


## create an email
outMail <-  OutApp$CreateItem(0)

## configure  email properties
outMail[["To"]] <-
outMail[["subject"]] <- "Hello"
outMail[["body"]] <- "Is it me you're looking for?"
outMail[["Attachments"]]$Add(admin_rep_full_path)

## send
outMail$Send()
```

The Problems.

- × Transition
- × Balance
- × Formatting



Learn TeX

- Frontpage
- Landscape pages
- Image wrapping



The slides and information contained in this presentation reflect my views only and not that of Heathrow Airport Holdings or Reach Contact Field Marketing