

Tripscanner

Compare Air and Rail Travel

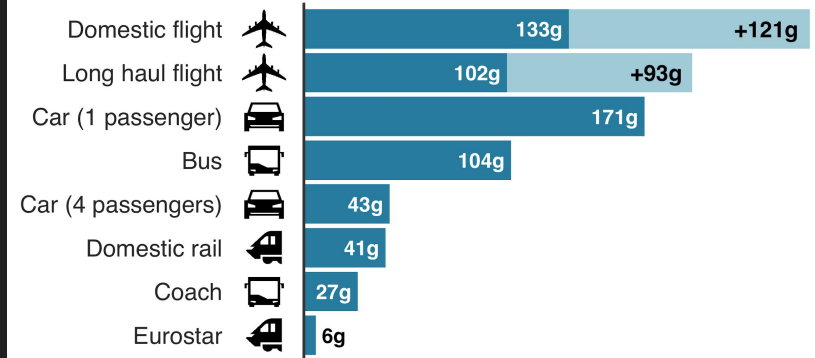
Rationale

- Air travel causes lots of carbon emission at high altitudes.
- Shorter journeys...
 - cause more carbon emission!
 - are better with trains as it is more environmentally-friendly and comfortable for the traveller.
- Skyscanner has experimented with rail travel so we knew that there was a genuine interest!
- Creativity in simplicity:
 - Trains are more-friendly and can be faster!

Emissions from different modes of transport

Emissions per passenger per km travelled

■ CO2 emissions ■ Secondary effects from high altitude, non-CO2 emissions



Note: Car refers to average diesel car

Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019



<https://www.bbc.co.uk/news/science-environment-49349566>

Software Stack

Frontend:

- Vue.js for a single-page web application.
- Bootstrap-vue as the CSS framework.

Backend:

- Python w/ Flask and Skyscanner API for the flight info.
- Node.js w/ express and EuRail API¹ (unofficial!) for the rail info.

¹ <https://github.com/juliuste/interrail>

From

 Freitag, 6. März 2020

edinb

Search

Edinburgh, United Kingdom

Yedinka, Russia

Dunedin, New Zealand

Ekaterinburg, Russia

Ejina Banner, China

Cities

berlin

Search

Berlin, Germany

Berlin, United States

Bellingham, United States

Burlington, United States

Burlington, United States

Number of Days 3



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Itinerary

Flight

LHR - CDG

Carrier: 881
Emission: 42.944763
Price: 62
Duration: 1.1 hours

CDG - BRU

Carrier: 819
Emission: 34.77001
Price: 77
Duration: 0.9 hours

BRU - LHR

Carrier: 881
Emission: 42.784004
Price: 56
Duration: 1.0 hours

Train

Departure:
2020-03-05T05:40:00.000+01:00

Total Time:
3.7 hours

Stations:
1. LONDON ST. PANCRASt (United Kingdom) (3.7h)
2. PARIS NORD (France) (3.7h)

Departure:
2020-03-05T06:13:00.000+01:00

Total Time:
1.8 hours

Stations:
1. PARIS NORD (France) (1.4h)
2. BRUXELLES-MIDI (Belgium) (0.4h)
3. BRUSSELS AIRPORT-ZAVENTEM (Belgium) (0.4h)

Departure:
2020-03-05T06:41:00.000+01:00

Total Time:
1.5 hours

Stations:
1. BRUSSELS AIRPORT-ZAVENTEM (Belgium) (0.5h)
2. BRUXELLES-MIDI (Belgium) (1.1h)
3. LONDON ST. PANCRASt (United Kingdom) (1.1h)

Improvements

- Support other regions of the world.
- Support re-arranging the itinerary for the optimal ordering.
- Include tram and bus times to the airports (i.e. how long it takes).
- Allow booking from the app.
- Improvements to the UI.
- Include prices for the trains
- Alternative flights and train journeys
 - Lowest price
 - Short time
 - Lowest emission
 - Overall "Best" by some heuristic
- Combine train and flight for a single trip.