



Richard Hackathorn <richard.hackathorn@gmail.com>

Time-Series Feature Extraction

Richard Hackathorn <richardh@bolder.com>

Tue, Nov 1, 2016 at 10:54 AM

To: Ian Willson <ian.willson@frontier.com>

Cc: Dan Graham <Daniel.Graham@teradata.com>

Out of curiosity... googled "dataset 'flight data recorder' open" and, you are correct, open FDR data is scarce! Proprietary, govt investigation, etc. However, got a few bites.

- [NTSB accident report of Gultstream crash on takeoff in 2014](#): contains two FDR segments (**as attached CSV**). Is this the kind of data with which we are dealing?
- Data elements for GE235 flight data recorder: Here is a [aviation.stackexchange](#) discussion. Nice chart!
- Data file format for FDR: Less-helpful [aviation.stackexchange](#) discussion. But does define a Data Frame from a Boeing manual.
- Searched [DATA.gov](#) for "flight data recorder": got 92 datasets, but not obvious if there are any real hits here.
- [Research paper](#) by Verbowski et al, "Flight Data Recorder: Monitoring Persistent-State Interactions" in 2006: Interesting group of authors! Anything helpful here? Seems like a proposal for new FDR architecture, where the term 'FDR' is generic to any complex system.

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On Tue, Nov 1, 2016 at 8:24 AM, Ian Willson <ian.willson@frontier.com> wrote:

Richard,

Thanks for the e-mails. Will get back to you on the substance soon (just moved/combined prod boxes, some issues...)

For public FDR, didnt find a lot so far. RC helicopter flight was one. I suggest possible making the data as several classes of sensors and varying flight leg. Can provide a range of demographics to do this. Will look more internally. We built and released a dumbed down 777 cad/eng chunk a while ago but it took over a year to do

Ian

On Oct 31, 2016, at 10:11 AM, Richard Hackathorn <richardh@bolder.com> wrote:

Ian -

Unrelated to Tech Spotlight

...

[github/ blue-yonder/tsfresh](#)

Found this research project yesterday about time-series feature extraction. I have scanned it twice and seems to be relevant to you. Attached is the article that will be presented at an ACM workshop in three weeks. Was just published to arXiv a couple of days ago.

Is it of interest to you? Would it assist in doing predictive analytics on IoT data at Boeing? How does it (or not) related to your temporal SQL work. If positive...