

#### **ARTICLE**

# Creating an open community to support reusable and reproducible aviation science

Junzi Sun, \*,1,2 Xavier Olive, 1,3 Martin Strohmeier, 4,5 Enrico Spinielli, 6 Tejas Puranik, 7 and Nàme with mañý diačriticś (font check) 8

(Received 1 April 2022; revised 1 May 2022; accepted 10 May 2022; first published online 20 May 2022)

#### **Abstract**

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Keywords: Aviation; reproducibility; transparency; data; software; re-science

Abbreviations: ATM: Air Traffic Managment, ADS-B: Automatic Dependent Surveillance-Broadcast

# 1. Introduction

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Some example open open-source research data (Schäfer et al. 2014) and tools (Olive 2019; Sun, Hoekstra, and Ellerbroek 2020). The end result is in Figure 1: nice, isn't it?

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected

<sup>&</sup>lt;sup>1</sup>Joint first authors

<sup>&</sup>lt;sup>2</sup>Faculty of Aerospace Engineering, Delft University of Technology, Netherlands

<sup>&</sup>lt;sup>3</sup>Office National d'Etudes et de Recherches Aérospatiales, France

<sup>&</sup>lt;sup>4</sup>OpenSky Network, Switzerland

<sup>&</sup>lt;sup>5</sup>University of Oxford, UK

<sup>&</sup>lt;sup>6</sup>EUROCONTROL, Belgium

<sup>&</sup>lt;sup>7</sup>NASA Ames Research Center, USA

<sup>&</sup>lt;sup>8</sup>University of Syldavia

<sup>\*</sup>Corresponding author: j.sun-1@tudelft.nl

<sup>©</sup> TU Delft Open Publishing 20xx. This is an Open Access article, distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike licence (https://creativecommons.org/licenses/by-nc-sa/4.0/)

font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. See also Table 1.

# 2. Method

Callsigns are nice in tt mode AFR88HH and æ = 1 inline

**Paragraph title** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 2.1 Method 1

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



Figure 1. JOAS Logo

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. <sup>1</sup>

### 2.2 Method 2

#### 2.2.1 Method 2-1

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

$$E = mc^2 (1)$$

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Parameter	Notation	Remarks
name	-	engine common identifier
manufacture	-	-
bpr	V	bypass ratio
pr	-	pressure ratio
max_thrust	$T_0$	maximum static thrust, sea level (unit: N)
fuel_c3	$C_{\mathrm{ff3}}$	fuel flow coefficient, 3rd order term (unit: kg/s)
fuel_c2	$C_{ m ff2}$	fuel flow coefficient, 2nd order term (unit: kg/s)
fuel_c1	$C_{\mathrm{ff}1}$	fuel flow coefficient, 1st order term (unit: kg/s)
cruise_thrust	$T_{\rm cr}$	thrust at the top of climb (unit: N)
cruise_mach	$M_{\rm cr}$	cruise Mach number for the thrust condition
cruise_alt	$h_{\rm cr}$	cruise Mach altitude for the thrust condition (unit: ft)

**Table 1.** Engine performance parameters

Hello, here is some text without a meaning. This text should show what a printed text will

<sup>1.</sup> This is how a footnote look like.

look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### 3. Conclusion

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# **Acknowledgement**

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### References

Olive, Xavier. 2019. "Traffic, a toolbox for processing and analysing air traffic data." *Journal of Open Source Software* 4 (39): 1518–1. https://doi.org/10.21105/joss.01518.

Schäfer, Matthias, Martin Strohmeier, Vincent Lenders, Ivan Martinovic, and Matthias Wilhelm. 2014. "Bringing up OpenSky: A large-scale ADS-B sensor network for research." In *IPSN-14 Proceedings* of the 13th International Symposium on Information Processing in Sensor Networks. 83–94. IEEE.

Sun, Junzi, Jacco M Hoekstra, and Joost Ellerbroek. 2020. "OpenAP: An open-source aircraft performance model for air transportation studies and simulations." *Aerospace* 7 (8): 104.

# **Appendix 1. Supplementary figures**

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# Appendix 2. Supplementary data tables

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# **Supporting Information Available**

Should need support when trying to reproduce this research, please contact Junzi.