



# Student Integrity™

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√analytikus



Through Machine Learning and AI Solutions, we empower educational institutions to increase their students' success rate.

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RETENTION – ATTRACTION –  
COMMITMENT - STUDENT  
SUCCESS



Holon IQ

2020 LATAM EDTECH

100

www.holoniq.com



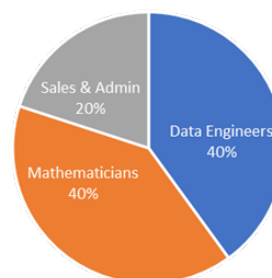
## About us & Presence

We help institutions become more competitive by solving specific problems using Advanced Analytics.

Our products empower our customers by integrating Machine Learning and AI techniques for predictive, prescriptive and cognitive analytics.

Offices in the USA & Mexico. Presence through partners in Colombia, Panamá, Chile, Perú and Ecuador. Customers in +15 countries.

Our Team



# Some of our Higher Education References



# Phil Ice – Chief Solutions Officer

Has worked in Higher Education for over 20 years. After earning his Doctorate, with concentrations in Instructional Technology and Research Methodology, worked as a professor at WVU and UNC, served as Vice President of Research and Development at the American Public University System. A significant part of his career has been devoted to focusing on the field of learning analytics.







# Student Integrity™

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Identify non-original content through  
Cognitive Analytics.



## Current situation

- The sudden move to remote, digital learning due to coronavirus restrictions implemented on campuses across the world brings the obvious concern that students may find it easier to cheat on homework assignments – especially in any essays and exams that are conducted online.

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# We're seeing different kinds of cheating

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- “With the rapid shift to online, we can’t watch students as they do their work in the same way that we might have in the past,” said Phillip Dawson, a researcher who studies cheating at Australia’s Deakin University. “We’ll see different kinds of cheating.”
- At one extreme, Dawson suggests someone could be paid to take an entire course on behalf of another student and the professor would never know. While this has always been a concern in online learning, a recent article in [Quartz](#) detailed how some students, in China, paid firms to finish their online semester following stay-at-home orders associated with the Coronavirus lockdown.



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# Buying papers and AI-based "recasting" are becoming more common

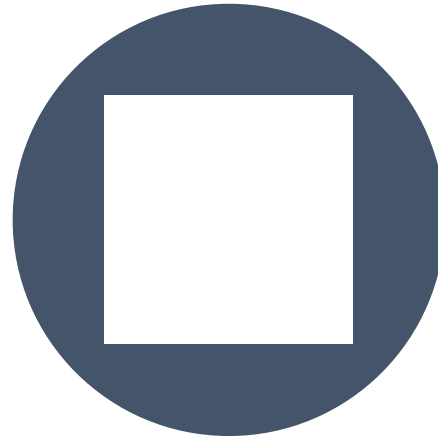
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- Students have long used the internet to buy essays online, with the trend becoming more prominent.
- Technological advances allow students to automatically paraphrase other people's work, making it more difficult for traditional anti-plagiarism tools to work effectively.
- [Spinbot](#), for example, is a simple service that "spins" or rewrites chunks of text.
- Students could also plug a paragraph of English text into Google Translate, translate it into another language, and then translate it back into English to get a version that looks different from the original.
- Students might even try using an AI-based writing tool to help them finish texts, such as the [Talk to Transformer](#) tool, which is built on a language model from the research laboratory Open AI.

# What if...?



YOU COULD IDENTIFY IF THE WORK  
SUBMITTED WAS PREPARED BY SOMEONE  
OTHER THAN THE STUDENT?



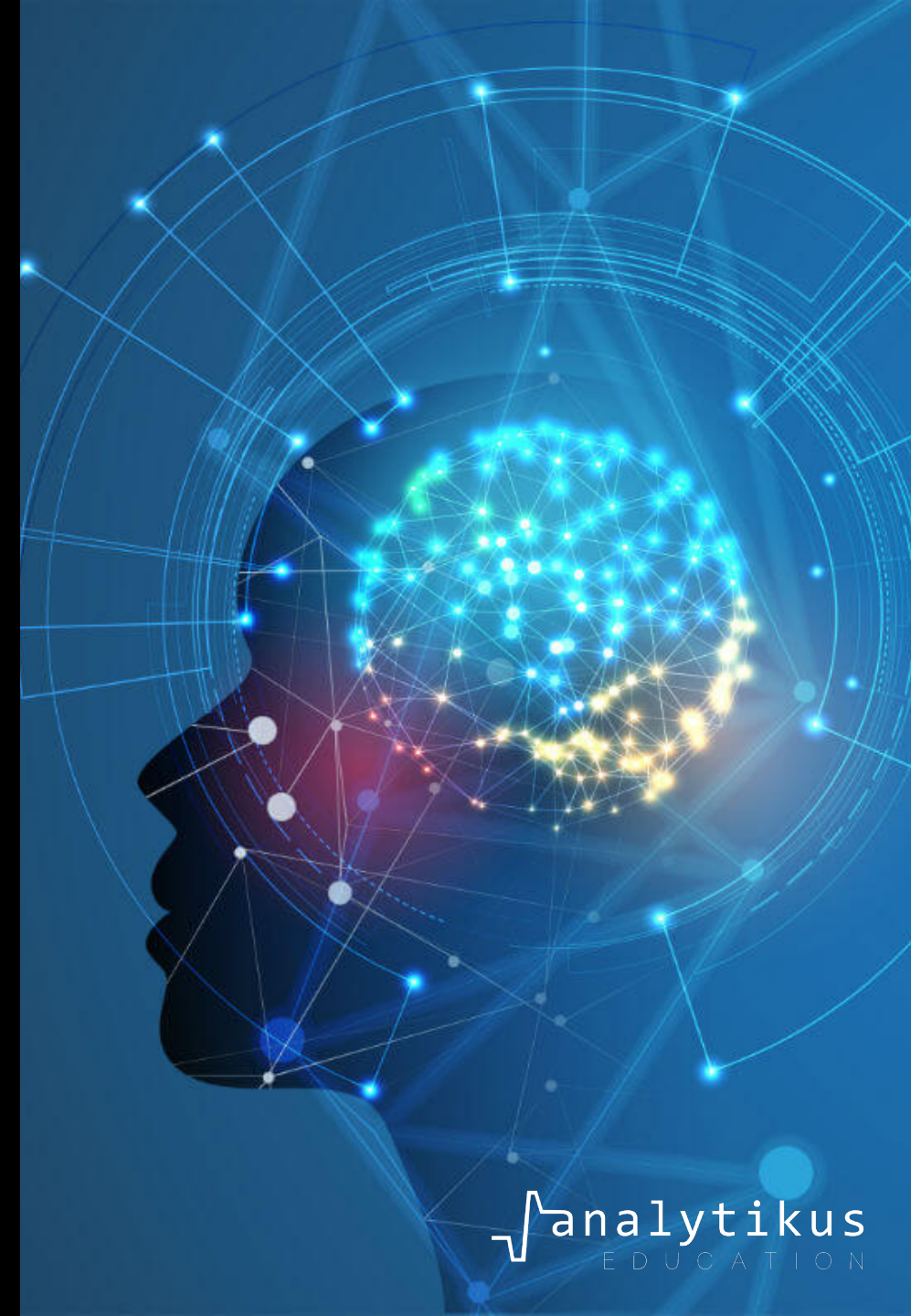
YOU COULD HAVE AN EARLY ALERT TO  
EMPOWER PROFESSORS AND FACULTY?



YOU COULD CHARACTERIZE AND ANALYZE  
YOUR STUDENTS' PERSONALITY TO FORM A  
BENCHMARK FOR ALL FUTURE WORK?

# What is Student Integrity?

- **Student Integrity™** is a solution designed to determine the likelihood that a student is submitting a work product that is not their own but does not qualify as plagiarism.
- An example would be when student hires an individual to write a paper on their behalf or uses bots to generate papers, replies, or other written artifacts. The solution provides the following functions:
  - Personality Dimension Profile is used as a baseline
  - Compares all new student work to determine the likelihood that the student may have not written the paper (e.g. had another write it for them).



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# How does it work?

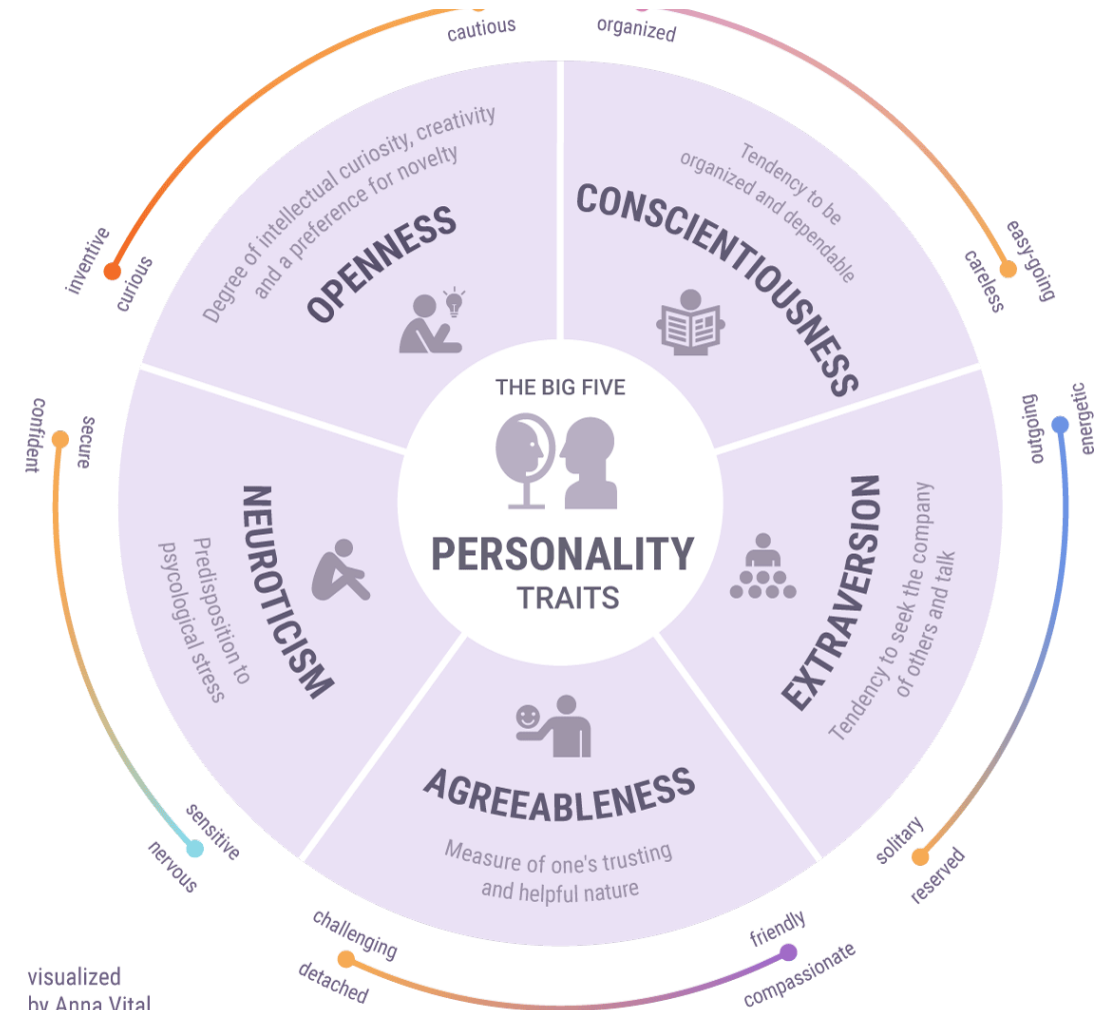
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1. Student provides open text.
2. A student personality baseline is created through a cognitive model.
3. Subsequent work, essays, exams runs through the cognitive model.
4. Outputs are compared against the baseline personality in order to identify if the same person generated the subsequent text.



# The Cognitive Personality Model

- Use case of linguistic analytics to infer individuals' Big Five personality characteristics from digital communications such as essays, exams, email, blogs, tweets, and forum posts.
- Big Five personality characteristics represent the most widely used model for generally describing how a person engages with the world. The model includes five primary dimensions: Agreeableness, Conscientiousness, Extraversion, Emotional range, and Openness. Each dimension has six facets that further characterize an individual according to the dimension.



visualized  
by Anna Vital

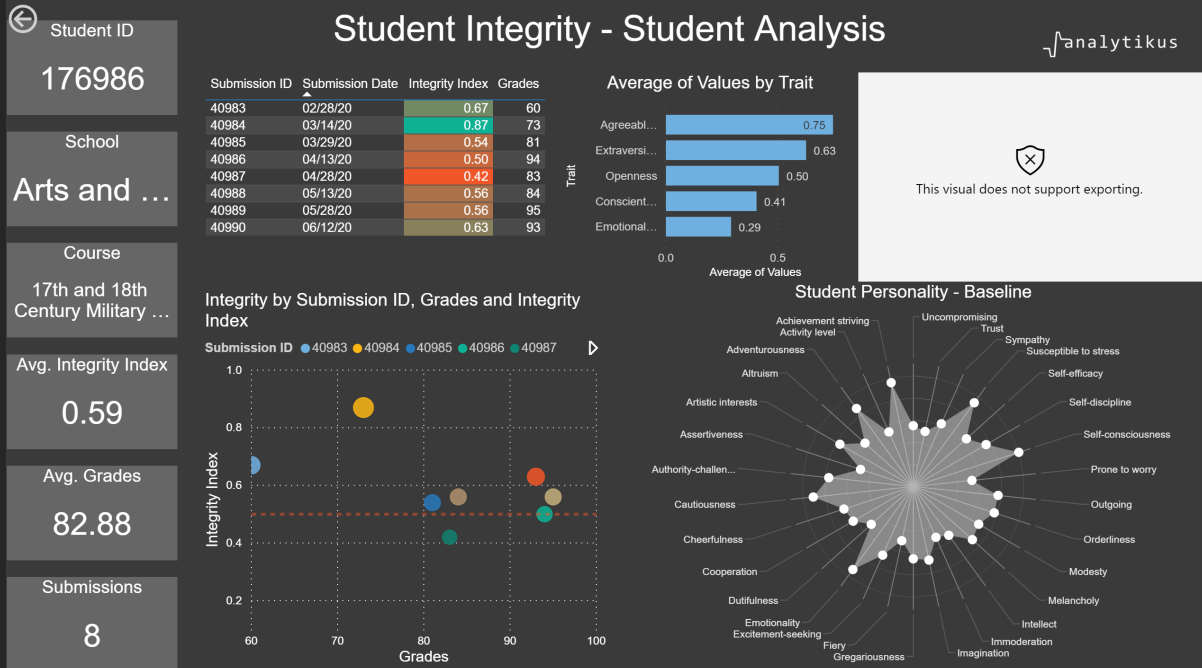
Source: J. M. Digman  
Personality Structure: Emergence of the Five-Factor Model





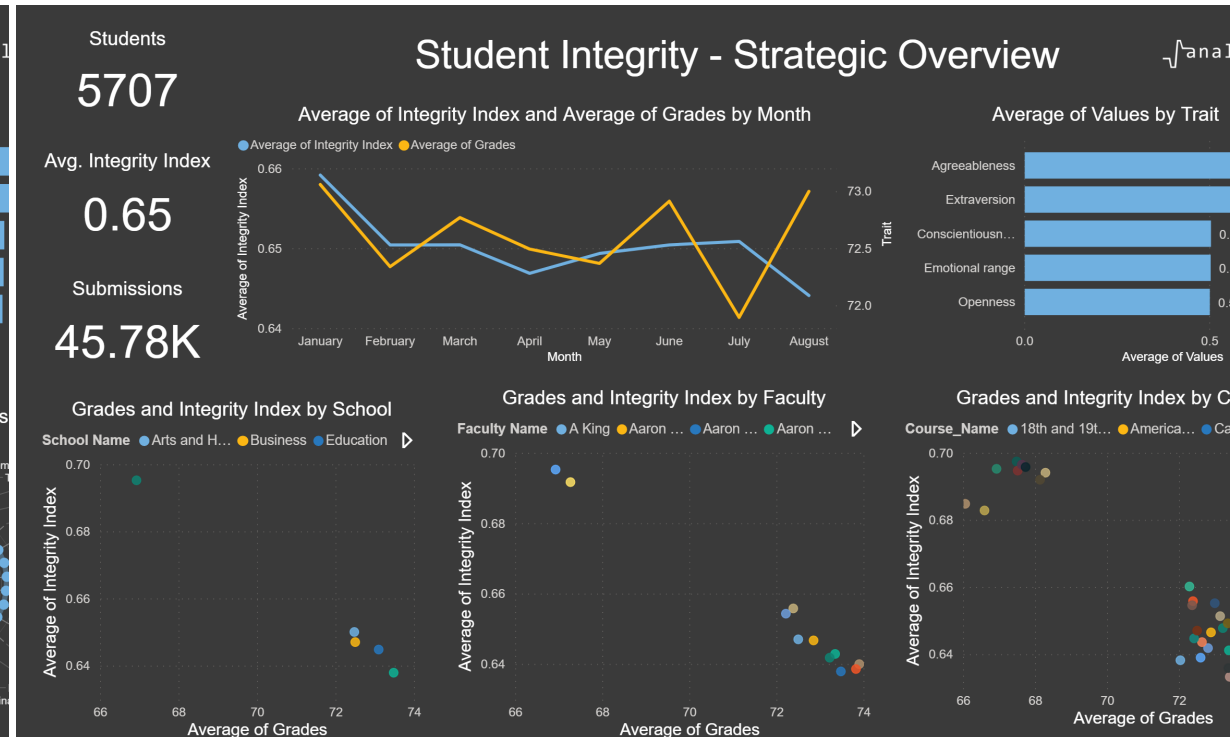
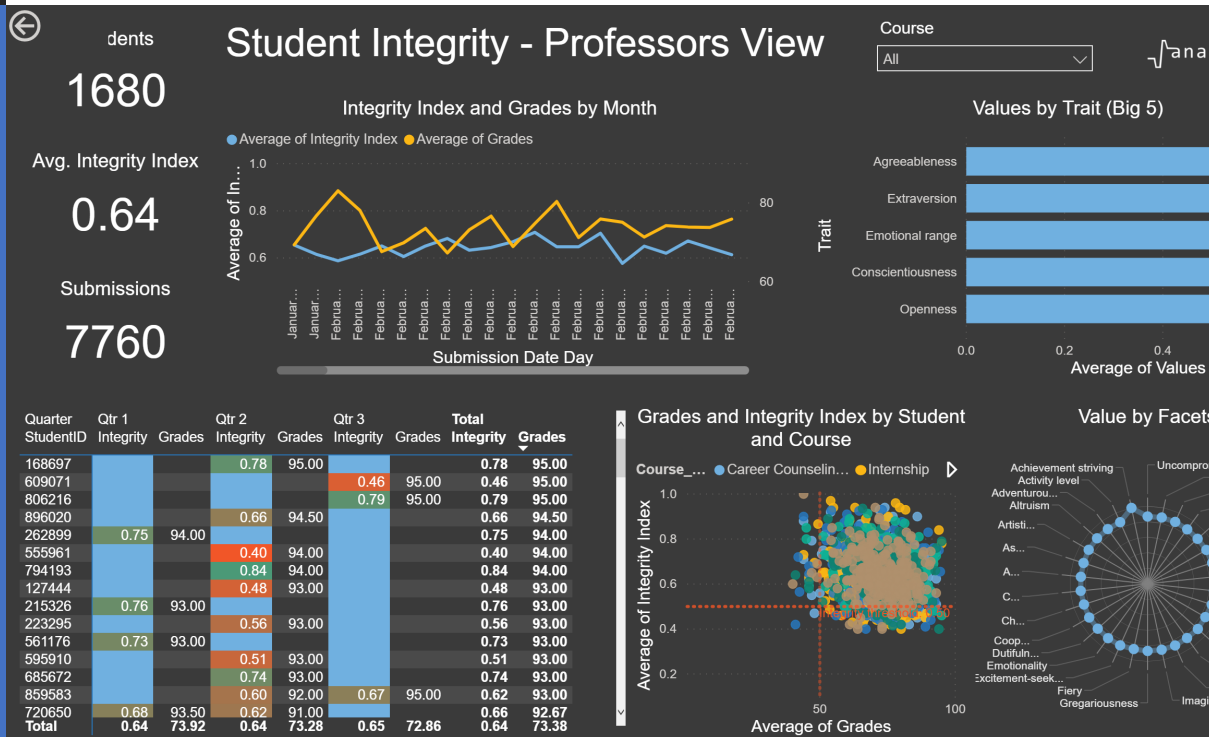
## Benefits

- Empower academia.
- Enforce integrity.
- Measure changes.
- Identify opportunities.



# Demo

## Student Integrity™



Students

5707

# Student Integrity - Strategic Overview

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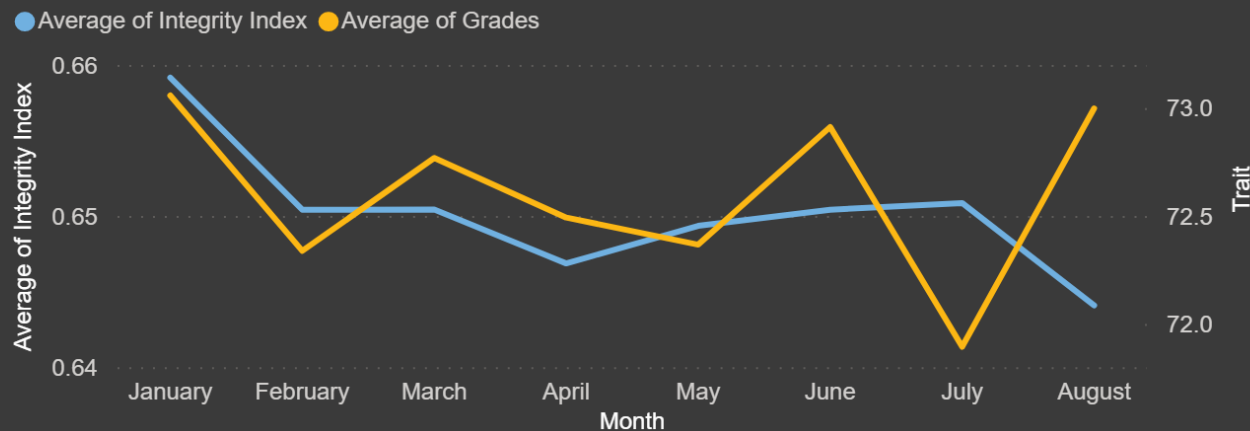
Avg. Integrity Index

0.65

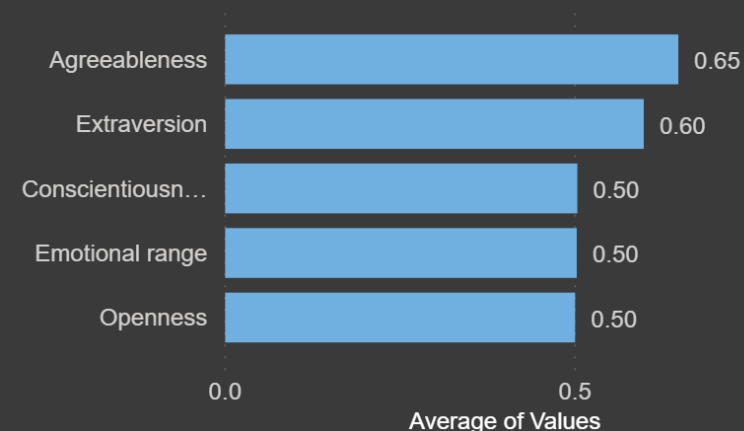
Submissions

45.78K

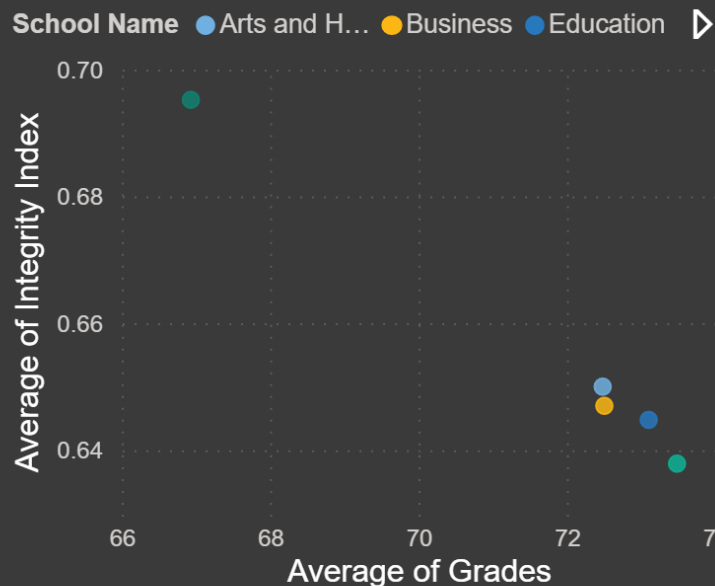
Average of Integrity Index and Average of Grades by Month



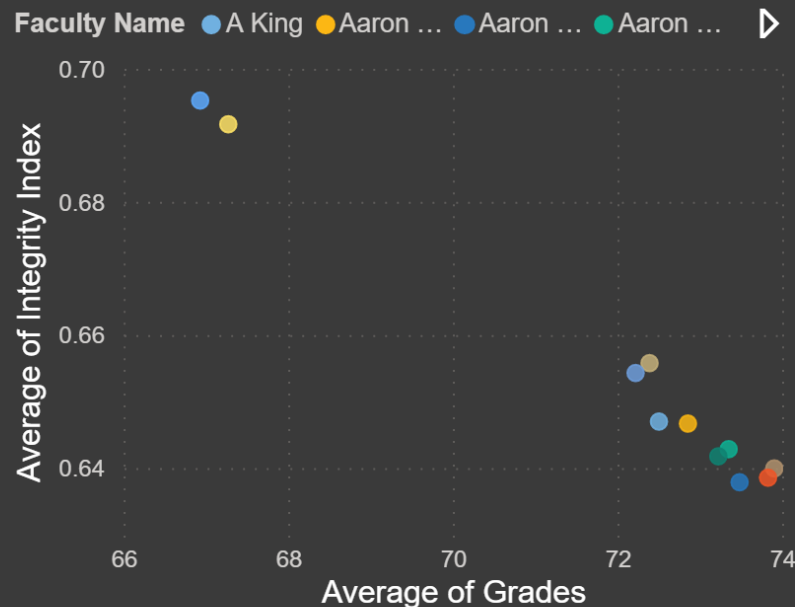
Average of Values by Trait



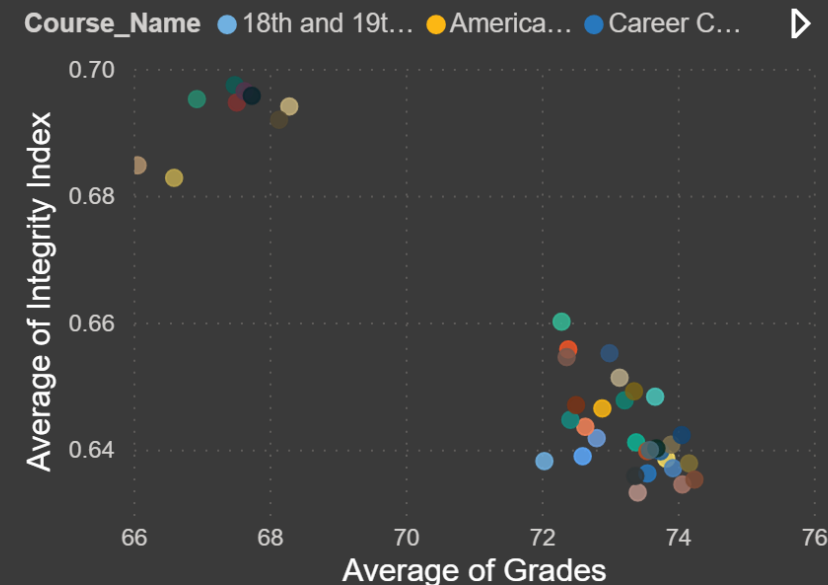
Grades and Integrity Index by School



Grades and Integrity Index by Faculty



Grades and Integrity Index by Course







dents

# Student Integrity - Professors View

Course

All



1680

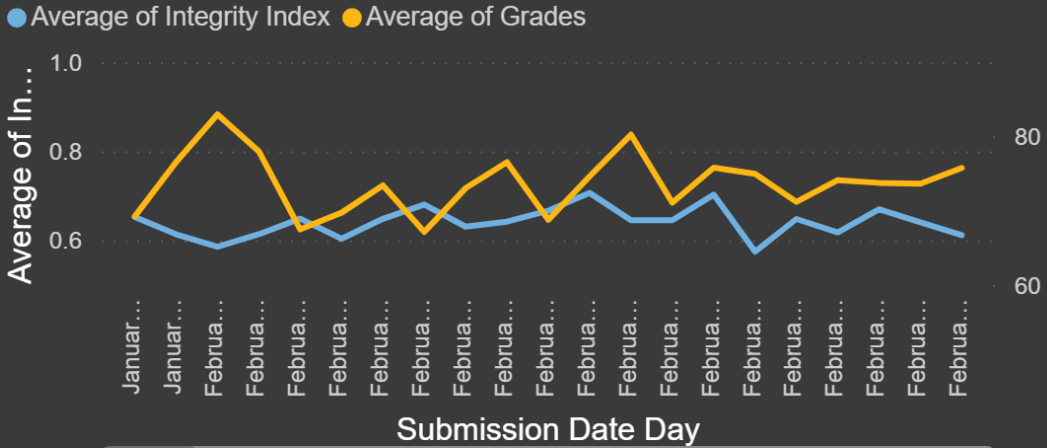
Avg. Integrity Index

0.64

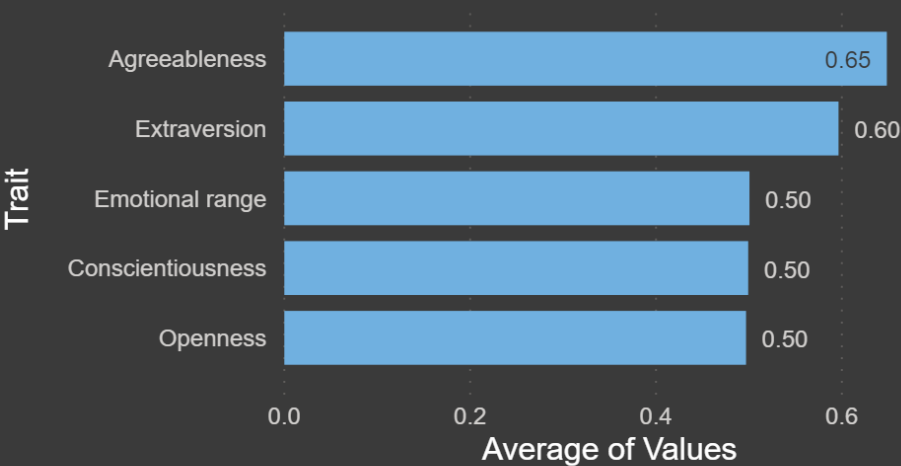
Submissions

7760

Integrity Index and Grades by Month

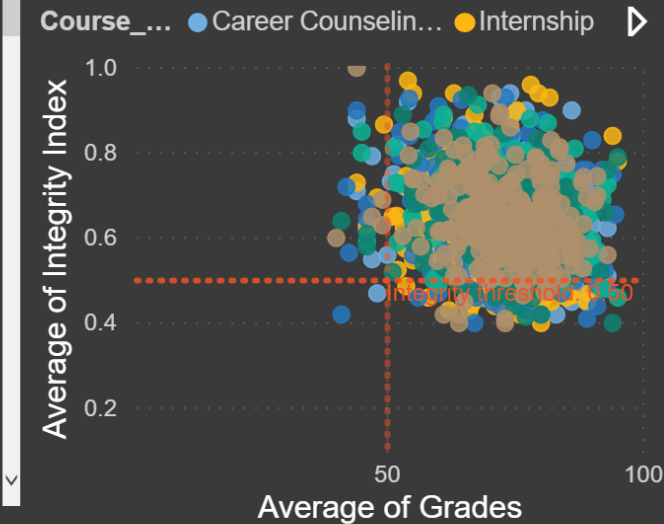


Values by Trait (Big 5)

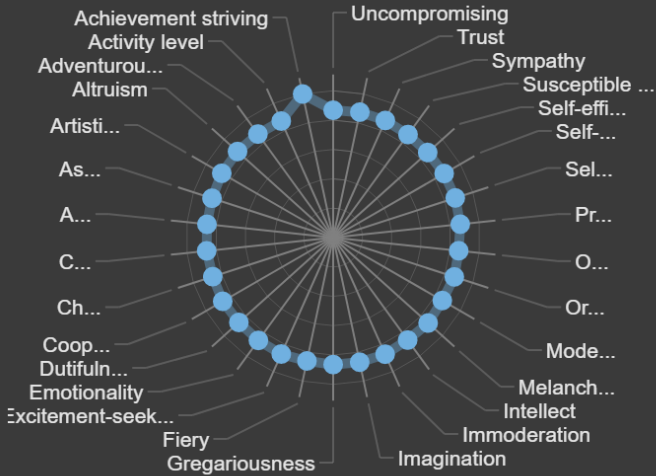


Quarter	Qtr 1		Qtr 2		Qtr 3	Total	
StudentID	Integrity	Grades	Integrity	Grades	Integrity	Integrity	Grades
168697			0.78	95.00		0.78	95.00
609071					0.46	0.46	95.00
806216					0.79	0.79	95.00
896020			0.66	94.50		0.66	94.50
262899	0.75	94.00				0.75	94.00
555961			0.40	94.00		0.40	94.00
794193			0.84	94.00		0.84	94.00
127444			0.48	93.00		0.48	93.00
215326	0.76	93.00				0.76	93.00
223295			0.56	93.00		0.56	93.00
561176	0.73	93.00				0.73	93.00
595910			0.51	93.00		0.51	93.00
685672			0.74	93.00		0.74	93.00
859583			0.60	92.00	0.67	0.62	93.00
720650	0.68	93.50	0.62	91.00		0.66	92.67
Total	0.64	73.92	0.64	73.28	0.65	72.86	73.38

Grades and Integrity Index by Student and Course



Value by Facets





Student ID

176986

School

Arts and ...

Course

17th and 18th  
Century Military ...

Avg. Integrity Index

0.59

Avg. Grades

82.88

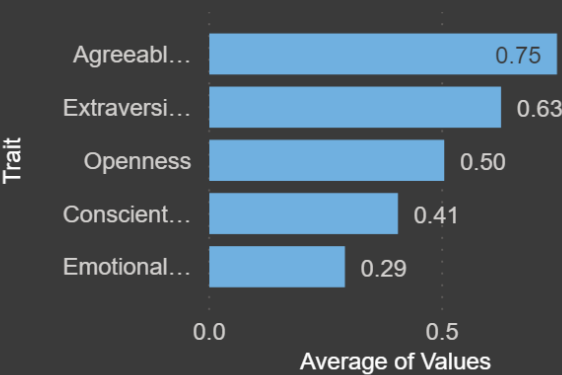
Submissions

8

# Student Integrity - Student Analysis

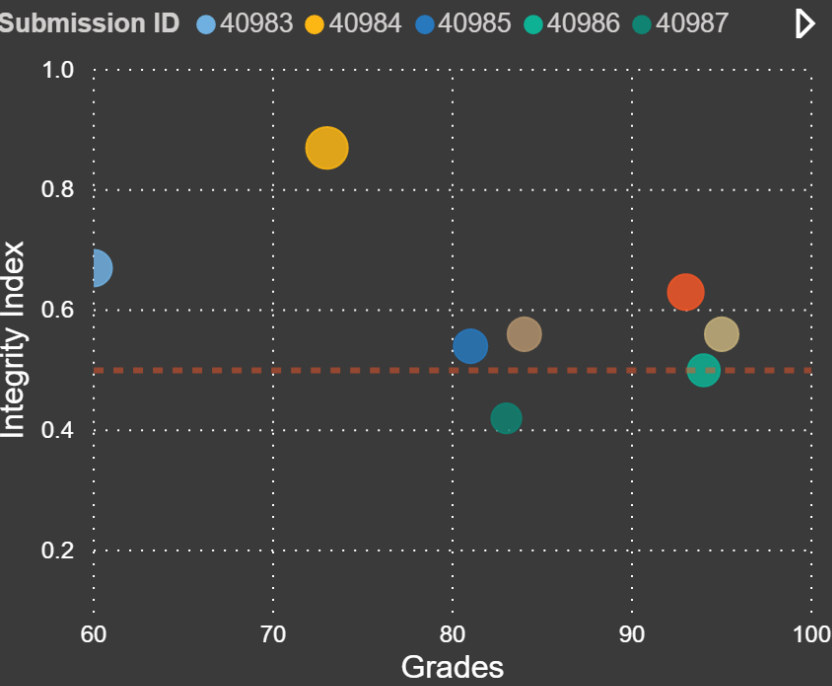
Submission ID	Submission Date	Integrity Index	Grades
40983	02/28/20	0.67	60
40984	03/14/20	0.87	73
40985	03/29/20	0.54	81
40986	04/13/20	0.50	94
40987	04/28/20	0.42	83
40988	05/13/20	0.56	84
40989	05/28/20	0.56	95
40990	06/12/20	0.63	93

Average of Values by Trait

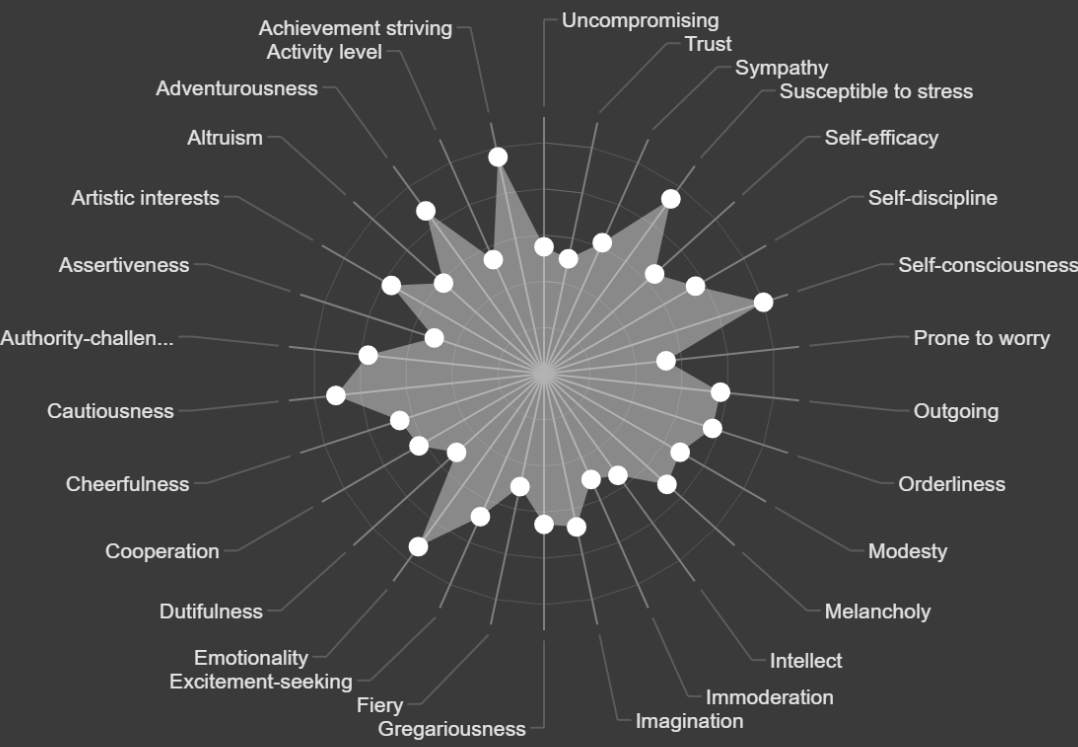


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Integrity by Submission ID, Grades and Integrity Index



Student Personality - Baseline





# Thank You!

We are at your disposal to provide you with more information about this proposal if required. We are convinced that we have the experience and competencies to make this Project with the University a success.

Miguel Molina-Coscolluela - CEO

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Phil Ice, Ed.D. - CSO

[Phil.ice@analytikus.com](mailto:Phil.ice@analytikus.com)



# Thank you



Miguel Molina-Coscolluela

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Ya estamos online, ¿y ahora qué?

1. Commitment Index
2. Knowledge Gap
3. Student Integrity

<https://analytikus.info/solucionesparaonline>

