

# IEEE VGTC VPG Visualization Contest 2015

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## *Perceived vs. Actual Student Interest*

### **Purpose**

To explain the data fields contained within the challenge dataset

### **Scenario for the data**

The attached data contains information about ACT-Tested High School graduates that have persisted to their second year in college. The data seeks to describe their indicated interests, as well as their declared majors at three points in time. The data is organized to include summarized information about the major, and the interest-major fit index developed by ACT for each indicated major.

The data are presented in aggregate form, with a COUNT variable indicating the number of individuals that have identical values for the data.

### **Points in Time**

The three points in time that are described by the data are as follows

- T1 - Provided during the registration process for the ACT. Usually during the Junior or Senior year of High School
- T2 / Yr1 - Collected in the fall of the freshman academic year (first year of college)
- T3 / Yr2 - Collected in the fall of the sophomore academic year (second year of college)

### **Hierarchy of College Majors**

ACT has developed a three layer hierarchy to organize our analysis of college majors, this hierarchy has three levels. The data provided for the challenge is from Level 2 – an 18 category view of college majors. Today, there are 294 different specific majors - “Level 0” – that have been categorized and organized. This dramatically reduces the complexity of the aggregation for the challenge. Each student actually indicates or declares an individual major (Level 0) for the challenge, we have reported the Level 2 category that this individual major falls into.

The examinee’s major is reported four times in the data:

- T1\_LEVEL2 – Major indicated as interest at time of ACT examination
- T2\_LEVEL2 – Major declared upon entering the freshman academic year
- T3\_LEVEL2 – Major declared upon entering the sophomore academic year

- HIGHESTLEVEL2 – The Level 2 major category containing the best-fit major based on the Interest Inventory

## ACT's Interest-Major Fit Index

The interest-major fit index is a measure computed by ACT based on responses provided to the ACT Interest Inventory. The index itself is a score between 1 and 99 – and cut points have been developed to identify when a fit is Good, Moderate or Poor. Only these categorical fits have been provided to simplify the analysis and reduce the complexity of the aggregation. For more information about the ACT Interest Major Fit index, read one of our research reports here - <http://www.act.org/emtrends/12/interestmajor.html>

The interest-major fit index is reported three times in the file.

- T1\_IMFIT – Fit score against the indicated planned major
- T2\_IMFIT – Fit score against the major declared upon entering the freshman academic year
- T3\_IMFIT – Fit score against the major declared upon entering the sophomore academic year

The order of categories is GOOD > MODERATE > POOR.

## College Type

ACT Research suggests important differences between students attending a 2-year or 4-year academic institution. The type of college attended by the student for the Freshman year (YR1) and the Sophomore year (YR2) are reported separately.

## Transfer

Additionally, many students end up transferring between institutions during their academic coursework. The TRANSFER variable contains a 1 if the examinee did transfer between institutions, even if the college type did not change. A 0 is reported if the examinee did not transfer.

## ACT Composite Score

The ACT exam reports a composite score in the range from 1-36. This range has been broken up into six distinct score ranges. The value contained in the column represents the score range that the examinee's highest tested ACT Composite score fell into.

## All Data Elements

ColumnID	ColumnName	ColumnDescription	Sample Values
1	Gender	Gender of the examinees	M/F
2	Actcat	ACT Composite Score	1-36
3	T1_Level2	Level 2 Major Category (Planned - High School)	Agriculture (18 Categories)
4	T2_Level2	Level 2 Major Category (Declared - First Year)	Agriculture (18 Categories)
5	T3_Level2	Level 2 Major Category (Declared - Second Year)	Agriculture (18 Categories)
6	T1_IMFIT	Interest Major Fit to Level 0 Major (Planned - High School)	Good, Moderate, Poor
7	T2_IMFIT	Interest Major Fit to Level 0 Major (Declared - First Year)	Good, Moderate, Poor
8	T3_IMFIT	Interest Major Fit to Level 0 Major (Declared - Second Year)	Good, Moderate, Poor
9	YR1	College Type Attended (First Year)	2-year/4-year
10	YR2	College Type Attended (First Year)	2-year/4-year
11	Transfer	Flag indicating if student transferred schools between the first and second year	0/1
12	HighestLevel2	Level 2 Major Category associated with best-fitting Level0 Major	Agriculture (18 Categories)
13	Count	Number of students with exactly the same data	1+