



SUGGESTED

# Higher Education Modeling Variables

Are you building a predictive model for enrollment or retention? Wondering which variables to include?

You're in luck! At Rapid Insight, we've spent two decades helping hundreds of colleges and universities build predictive models for enrollment and retention. Along the way, we took notes on which variables tend to lead to successful models.

We compiled this list of must-have variables for enrollment and retention models, and we're happy to share them with you!

# Prospect/Inquiry to Apply Model

- Identifier
- Inquiry Source (event/channel)
- Expected Entry Term
- Gender
- PreAdmitDate (to calculate days since pre-admit)
- # Times Checked App Status
- State
- In-state Flag
- County
- Zip (used to calculate distance from campus)
- International Student Flag
- High School code (used to calculate # applicants and # enrolled from each person's high school)
- HS Type (if you have it)
- Applied flag (indicating whether the prospect applied for that term)
- Any other demographic or academic information available

# Applicant Enrollment Model\*

\*In addition to information listed previously

- Identifier
- HS GPA
- Standardized test scores (SAT Math, SAT Verbal, ACT)
- Convert ACT scores to SAT equivalent using concordance tables
- Gender
- Application date
- Age or Birth date
- Prospect Status
- Applicant type (online app, regular, etc...)
- Program (major applied for)
- Visited campus flag (multiple flags if tracking individual event attendance)
- Expected Financial Contribution
- Financial Aid offered
- Scholarship amount offered
- Application Fee Waiver Request
- Accepted Flag (0/1 telling if the applicant was accepted, unless already in Prospect Status)
- Any other demographic, academic or financial information available
- High School class size
- High School Rank



# Retention Model\*

\*In addition to information listed previously

## Student - Demographic

- Identifier
- Date of birth or age at start of first term
- IPEDS Citizenship/Ethnicity/Race value
- Ethnicity
- Race (all categories, not restricted to IPEDS values)
- First generation status
- City of permanent residence
- Zip Code of permanent residence
- Student Residential Status (living on campus, off campus, commuter)
- Student employed flag
- Fee reduction/waiver requested
- Military background?
- Have children?
- Multiple flag fields identifying participation in various campus activities, campus life

## Institution - Academic Program Related

- Starting student type (new, transfer)
- Number of credits registered for
- Current Student type code/desc (new, transfer, returning, continuing)
- Program level (Associate vs. Bachelors)
- Program type (online, face-to-face, hybrid)
- Degree sought type (assoc, bach, certificate) & subtype (arts, science), possibly as AA, AS, BA, BS, etc.
- Program code/desc
- Major code/desc
- Concentration code/desc
- Academic unit code/desc
- Department unit code/desc
- Transition course (how to go to college course) (y/n or actual if multiple types)
- Taking developmental courses?
- Previous semester Term GPA (if predicting for current students)
- Period GPA to period GPA for each period enrolled
- Hours attempted and completed period to period
- Degree hours completed
- Degree hours attempted
- Program changes
- Major change count
- Academic unit change Y/N (ie when formerly psych in Arts Sciences, now Economics in Business School)
- Retention Flag (0/1 telling us if the student was lost or not)

# Retention Model\* (Cont.)

\*In addition to information listed previously

## Student - Academic / Online History

- High School class size
- High School Rank
- High School Rank in Class
- Advanced Placement (AP courses) articulated by count and hours
- Hours transferred from another institution
- Student support services (enrollment/admission counseling) available?
- Requested tutor, Assigned tutor
- Visited writing center
- Visited math center

## Financial Aid

- Receiving financial aid
- FAFSA yes/no
- EFC
- Pell eligibility (indicator of socio-economic status); Flag Pell awarded
- AGI Student; AGI Parent
- Orientation (session # if multiple)
- Flag parent/guardian attended orientation
- Flag application fee waived
- Any admissions index used for admit decision
- Gift Aid Y/N; Gift Aid Sum
- Scholarship amount offered original
- Loans amount
- Total financial aid amount offered original
- Awards by Federal, State, Private
- Workstudy Y/N

## Course - Related

- Total courses
- Total hours
- Total High DFW courses; Percent High DFW load
- Course registrations self or administrative
- Registered for classes online or in person?
- Course hours by instruction method
- Amount of text vs. interactive content in the course
- Lessons with immediate feedback?
- Teacher interaction with students
- Peer-to-peer forum?
- Courses at the 100/1000, 200/200, 300/3000 level
- Ever attended a class on-campus
- Whether online learner plans to attend both online and on-campus classes
- Number of previous online courses taken
- Ever attended a class on-campus?
- Plans to attend both online and on-campus classes?



# How can Rapid Insight help you?

We can...

- Help identify where these variables live in your Student Information System
- Provide **QuickStart Templates** to help you prepare modeling files from your Student Information System
- Help you build models for enrollment, retention, student success, and other applications
- Offer support from our experience working with customers in roles similar to yours

We are genuinely invested in our customers' success, and we go the extra mile to provide the resources and support our customers need.

If you're interested in learning more about our intuitive tools and expert support, click the buttons below to contact us!



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