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## Squadron Officer School Flight Diversity Model

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**Abstract:** Every 40 days, Squadron Officer School (SOS) currently uses a basic model and manual computations to create 40-45 flights of students based on their diversity traits. The administration at SOS believes more diverse flights are beneficial to the overall experience and development of their students. The purpose of this project is to develop a user-friendly tool that completely automates the assignment process and assigns students to maximize their respective diversity amongst peers in a flight. The tool provides the user the opportunity to define the parameters of the model such as number of flights, importance of each constraint, and number of accompanied flights. We develop a heuristic model utilizing analytical hierarchy to diversify flights among the various desired traits. Personnel can use the tool eight to nine times a year to create flights at SOS saving around 50 man-hours a year while increasing the overall development and experience of their students.

*Keywords:* Diversity, VBA, Heuristic, Allocation, Hierarchy