

1135-60-2442 **Kumer Pial Das*** (kumer.das@lamar.edu), Kumer Das, PO Box 10119, Lamar University,
Beaumont, TX 77710. *Choosing accessible and open problems for undergraduate researchers.*

Students think that most, if not all, problems in mathematical sciences are beyond their ability to research them. However, the growth of REUs, thesis, and research projects in the past two decades show that undergraduates can perform math research, or even benefit from going through a structured and well-administered research experience. A mentor is responsible for preparing young scientists by providing them a balance of research and educational elements. Such balance is necessary for many reasons. Primarily, students appreciate the relevance of their coursework in their research. This study shows how to choose accessible problems for students based on their interest and expertise in courses such as calculus, statistics, and stochastic processes. It focuses on problems related to statistics and big data analytics. One of the effective sources of problems is the work of previously conducted undergraduate research under the guidance of the mentor since there is usually quite a few number of problems left unsolved in every research. The mentor encourages researchers to include a section called “open problems” or “future research” in their final report which may be used by future researchers. An excellent collaboration with industries also provide some open problems each year. (Received September 26, 2017)