## Exam 2 Buan 6340

**Due:** Thursday, Aug 8<sup>th</sup> at 11:59 pm

## **Question 1**

Every person has a data set that you can find by taking the md5 hash of your NetID, and looking it up in the <code>exam1.csv</code> file. Each row is one data set for one person in this course. No two data sets are the same.

To create these data sets, I used a generalized Kumaraswamy distribution. You can read about the distribution at <a href="https://en.wikipedia.org/wiki/Kumaraswamy distribution">https://en.wikipedia.org/wiki/Kumaraswamy distribution</a>. That page even discusses the generalization that I used. The Kumaraswamy distribution usually has a domain [0,1], but I have location-shifted and scaled the distribution to have some other lower and upper bound.

You job is to estimate the lower bound, upper bound, a, and b parameters. You can use any means available to you, but you must explain your reasoning. Even if your estimates are dead wrong, I should be able to see your logic, and if your logic is **reasonable and clear**, I will give you full credit.

I will warn you that this challenge is not at all easy. There are many approaches that you could take. I'm happy to see out-of-the-box solutions here. I don't have one right answer that I'm looking for. If you are stuck, take your time. Think about it and try something, even if it's a bad idea. Show me how you think about a very hard problem. I don't expect you to get the right answer. What I do expect is that you can communicate how you think about a very hard problem.