Effect of change in Salt concentration on Blood Pressure

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Research Proposal

Purpose of this exercise is to understand how change in salt concentrations affect blood pressure. Abnormal blood pressure is the leading cause of various health ailments, both High and Low blood pressure affects a person’s cardiovascular, renal and metal health. Although there are a number of factors affecting blood pressure, however salt concentration is one of them and holds a direct correlation with the salt concentration. Motivation for this problem arose from a recent change in the normal blood pressure range being lowered to previously defined on.

We will use the data set obtained from R datasets website [1]. Data set consist of salt concentration and blood pressure with about 52 data sets. We will try to see how the blood pressure changes with the change in the salt concentration. We will try to do numerical differentiation and in particular use one of the high accuracy divided difference formula [2].

References

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| [1] | "R Data Sets," [Online]. Available: https://vincentarelbundock.github.io/Rdatasets/datasets.html. |
| [2] | S. C. Chapra and R. P. Canale, Numerical Methods for Engineers. |