

## CAS 781 Assignment 5

Please do three of the following six problems, related to your presentations. You cannot do your own. If you have any questions about a problem, please contact the person who wrote the problem (if you need their contact info, let me know).

1. (Siqi) For hotspot attacks, which positions are more likely to cause hotspot and why?
2. (Zhi) Why does Cassandra use an order preserving hash function to partition its data?
3. (Maryam)
  - (a) Explain how ARIMA(2,1,2) model predict faults. You should first write mathematical representation for it, explain the terms in the formula, and describe how it is used to predict future values.
  - (b) Explain why relaxed linear programming Support Vector Data Description (SVDD) is used instead of SVDD.
4. (Tianhao) There are three typical kinds of public cloud service models, in order of decreasing enterprise control: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). Compare control rights of enterprises under these three models. Which model must require the service provider to provide security
5. (Songyi) How does SDN solve the vertically integrated problem of the old network system?
6. (Somayye) How are online algorithms evaluated? What is competitive ratio?