Attached is a simulated user activity log for a fictional simple social media network. Each log entry contains a user id, unix timestamp, and name of the activity done. Log entries are encoded as individual json objects taking up an entire line. There are only four activities—login, logout, make\_post, and view\_post.

Below are three open-ended questions about the network, ordered by estimated difficulty.

1. **How many time zones are represented among the user base?**
2. **Are there any outlier users? What makes them special, and what might cause their behavior?**
3. **Is it possible to project any network activity metrics into the year 2021?**

We are much more interested in a discussion of your thoughts on the problem than the solution itself. For example, a simple approach with a careful discussion of its drawbacks and unexplored alternatives is more valuable to us than a terse presentation of a state-of-the-art solution.

Responses can be submitted in any form or collection of forms, including word documents, source text files, or jupyter notebooks. Any source code will need to be Python or R.

Please submit your response within 7 days.