

KARAN THUKRAL - 20460691

# ENGINEERING LOGBOOK

SYDE 461

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## *Week 1: Sept. 11 - 17*

- Discussion with team members to clarify the idea and discuss the potential interest
- Discussions with Lyrical Security<sup>1</sup> regarding the data access policy along with NDA and IP agreements. <sup>1</sup><http://lyricalsecurity.com/>
- Discussion around potential supervisor

## *Week 2: Sept. 18 - 24*

- Team met with and signed Alex Wong as our supervisor
- Back and forth with Lyrical Security about details of NDA and IP agreement
- Finished team and advisor contracts
- Talked with Alex Wong regarding the details of the NDA

### *Sept 23: Speed Dating Round 1*

#### *Team 7: Snow Removal*

- No good fully automated way
- Risk of injury while removing snow
- Need more affordable options
- Has a good mix of skills in the team members to pull it off

#### *Team 10: International Shipping*

- Using US + Mexico border as example
- lost of illicit goods being shipped
- Not sure how to tackle it yet
- Looking into modelling the physical steps in shipping and then find ways to improve it.
- One idea is a tamper proof seal

#### *Team 5: Heat Exhaustion*

- Early detection of heat exhaustions
- #2 cause of death for athletes in US

- Health damage or death can happen from heat exhaustion
- Need to measure a good approximation of internal body temp to be able to detect it
- Prof Stashuk as advisor. Good choice

#### *Team 1: Real Time Wait Time*

- How busy is the restaurant I want to go to?
- How long will be the wait time?
- One challenge is to take into consideration crowds inside and outside the location
- Potential for ML

#### *Team 2: Women's Health*

- Uncomfortable topic to talk about
- Lot of stigma
- Chat bot to make this conversation easier
- Source info and knowledge from doctors
- Need to scrape existing forums etc to train the NLP model. This will be challenging
- Should not use conversations to train the model since can lead to mis-training and ruin the purpose - example Microsoft bot

#### *Team 4: Pressure Ulcers*

- Why does it happen?
- How do you prevent it?
- How do you take proactive action towards it?

#### *Team 8: Understand Products*

- Understand existing info about products by using forums, social media reviews etc
- structure this unstructured data somehow - NLP problem

*Feedback for Us*

- Try and narrow the scope
- Cannot process each packet in realtime without adding overhead
- Have very clear ways of testing and validating it
- Look at Cloudflare. Potentially have a contact there through someone in class

## *Bibliography*

Vojtech Franc, Michal Sofka, and Karel Bartos. Learning detector of malicious network traffic from weak labels. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)*, Porto, Portugal, 7–11 September 2015. URL <http://www.sofka.com>.

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