CMPT 340 Project Proposal — Team Bio Boys (G20)

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- **Short Project Name:** BioBuddy
- **Project Title:** An AI driven chat-bot to assess susceptibility to certain diseases, focusing primarily on SARS-CoV-2.
- **Project Motivation:** The driving motivation behind this project is the increasing spread of the SARS-CoV-2 virus. This new pandemic has caused panic and paranoia across the globe. BioBuddy hopes to educate and raise awareness to the general population as well as becoming a useful tool to assess the risk of people who may have the novel Coronavirus.
- **General Project Goals:** In this project we will be developing a rudimentary risk assessment interface. Through the incorporation of AI technology and efficient search algorithms, the interface would be capable of gathering information about an individual's conditions as well as their timeline of symptoms to make an assessment on if SARS-CoV-2 is the likely cause of illness. Based on the percentage likelihood of the assessment, our application will then recommend possible courses of action based on past cases as well as expert opinion.
- **Project Steps:**
  - Acquire and process the data
  - Create the decision tree
  - Create some way of presenting the output
  - Implement interface to a chatbot front-end
  - Host web app with cloud services
- **Team Member Duties:**

Name	**Duties**
Ali Arshad	Front-end Development
Nick Chubb	Research, Back-end
Michael Huang	Research, Back-end
Sina Khalili	Back-end Development
Logan Militzer	Research, Decision Tree, Front-end Support

- **Anticipated Problems:**
  - Insufficient data
  - Under-reporting risk
  - Over-reporting risk
  - Scope of project being too big for the given time frame

- **Timeline:**

Timeline	Goals	Sub-goals
Week 1	- Make project proposal - Learn language and tools to be used	- Designate roles and project structure
Week 2	- Acquire data - Process data - Create front-end and back-end	- Complete background research on relative topics - Select main algorithms
Week 3	- Implement decision tree - Integrate of project components	- Create project report
Week 4	- Finalize project report - Finish front-end and back-end	

- **Detailed Anticipated Results:**
  - Accurate risk assessment of user condition based on provided symptoms
  - An intuitive interface that easily communicates the threat of SARS-CoV-2 to a user

References

[1] New York Times. Covid data. https://github.com/nytimes/covid-19-data, 2020.

[2] Facebook. A declarative, efficient, and flexible javascript library for building user interfaces. https://github.com/facebook/react, 2020.

[3] Clojure Foundation. The clojure programming language. https://github.com/clojure/clojure, 2020.

[4] Canada Public Health. Coronavirus disease.