**2019 BIG DATA HACKATHON PROJECT SUBMISSION FORM**

Complete the following information and upload to your team number GitHub repository (github.com/BigDataForSanDiego) by 10:00 a.m. on Saturday, March 16th (along with your team’s final pitch presentation slides).

**Team Number: 201**

**Team Name: LightSmart**

**Team Members:**

*Name*

*Active SDSU student?*

*Female active SDSU student?*

*Active SDSU veteran?*

*14th grade (college 2nd year) or younger*

*Karah Shah*

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Sneha Thanasekaran

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Cliff Phan

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**Jhaymar Sabino**

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**Tommy Stone**

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**Sean Burk**

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**Ingerid Barbosa-Farias**

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**Carlos Hernandez**

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**Team Leader: Karan Shah**

**A question your team is answering (check a box OR provide a question your group created)**

**Smart City and Environment**

How can San Diegans have access to an energy efficient, cost effective and environment friendly city by implementing smart streelights.

**Your team’s hackathon idea in TWO sentences:**

**Reduce light pollution and energy consumption from city street lights by using the city regulations for acceptable illuminance levels.**

**We have designed policies and procedures for smart traffic light network using our luminosity control system to dynamically adapt with the changing traffic situations.**

**Dataset(s) your team are using for the project. Provide name and URL:**

- San Diego Street Light locations (SCALE SD): https://data.sandiego.gov/datasets/streetlight\_inventory/

- US department of Transportation, US traffic 2015: https://www.kaggle.com/jboysen/us-traffic-2015

**The impact of this project on your selected theme:**

We estimate that under the new system we could save $2,800 per night operation which would come out to almost $1,000,000 a year  
  
We estimate that we could reduce the light pollution by 419,316lx from approximately 40,000 lights across San Diego, which would raise the overall brightness of the city by approximately 0.114lm/ft2

**The next steps needed to launch the project:**

• AI

◦ With increase usage overtime the smart lights will create more accurate predictions for light fluxuations, traffic reporting, parking etc. etc.

• Wisdom of Crowd:

◦ Since every system has its own data, different systems could learn more from each other by sharing data.

◦ These smart lights can give live traffic updates that are more accurate than those of Apple and Google Maps.

◦ Since this is a network of lights, the lights can communicate with each other to better control traffic.

◦ Since the lights can communicate, if a sector of lights go down the surrounding smart lights will optimize the environment to create predictions for traffic and light requirements