# SUPSI

# Scientific Computing with Python*

Kamini Garg
kamini.garg@supsi.ch
Istvan Lengyel
ilengyel@eit.ac.nz

# Projects

1. Time distance based Location recommendation system using FourSquare Data

2. IMDB Database of Hollywood Actors and Actresses

3. Interest based location recommendation system using FourSquare Data

4. BIXI: Bike Station Live feed

5. Twitter Data Analysis

# Project Marking

1. Completion of first milestone due date **22 December 2020**

   A one page brief on how you intend to solve the problem in terms of algorithm, tools, modules, data structures ? **(20 Marks)**

2. Completion of Second milestone due date **8 January 2021**

   Partial results from project in terms of solving some of the question asked on the detailed project scope **(30 Marks)**

3. Completion of third and final milestone due date **29 January 2021**

   Submit working source code and 5 page report **(50 Marks)**

**Total marks for this project are 100 Marks**

# Projects

***1. Time distance based Location recommendation system using FourSquare Data***

➡ Location history of users (userID, venueID, lat, long)

➡ Social Networks of users ( Friends)

➡ Main task will be to recommend new places and route based on the time distance ( i.e. the place is near in terms of travelling time)

➡ Specific questions will be provided in next week

< 4 >

# Projects

## 2. IMDB Database of Hollywood Actors and Actresses

# Projects

*2.  IMDB Database of Hollywood Actors and Actresses*

➡ Data base should contains profile of actors

➡ Their all time movies, their ratings etc.

➡ Your software should list all the available actor list

➡ Specific questions will be provided in next week

# Projects

### 3. *Interest based location recommendation system using FourSquare Data*

➡ Location history of users (userID, venueID, lat, long)

➡ Semantic meaning of VenueID i.e. bar, park etc.

➡ Main task will be to recommend new places based on user interests.

➡ Specific questions will be provided in next week

# Projects

*4. BIXI: Bike Station Live feed*
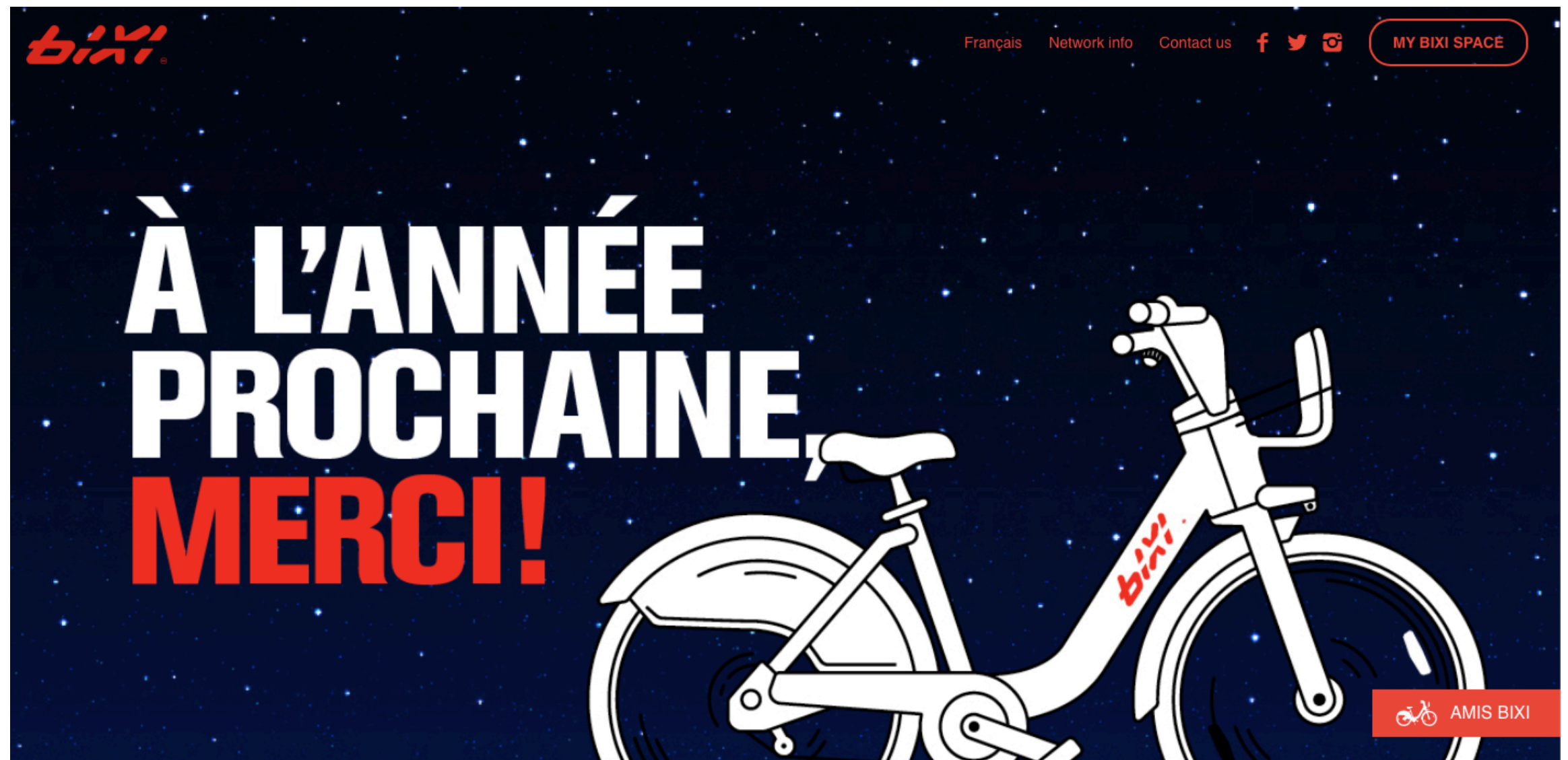
# Projects

## 4. BIXI: Toronto Bike Station Live feed

➡ This dataset contains BIXI bike stations information sizes in the City of Toronto.

➡ Location of bikes, number of available bikes and docks.

➡ Main task will be to parse live feed and find the nearest bike and docks available.

➡ Specific questions will be provided in next week

# Projects

### 5. *Twitter Data Analysis*

➡ You would need to acquire the Twitter data for a specific event using Twitter API.

➡ Process gathered tweets and users in terms of sentiment of tweet, their friends etc.

➡ Specific questions will be provided in next week

# Project MileStones

➡ Project Upload -> **15th December 2020**

➡ Project Choice filling on Moodle -> **15th December 2020**

➡ Project Allocation -> **15th December 2020**

➡ **Deadline for 1st milestone -> 22nd December 2020**

*Small write up for how you intend to solve the problem in terms of algorithm, tools, modules, data structures ?**(20 pts)***

# Project MileStones

➡ **Deadline for 2nd milestone -> 8th January 2021**

*(Partial results from the project in terms of solving some questions)(**30pts**)*

➡ ***Deadline for 3rd milestone -> 29th January 2021***

*(Submit working source code + report (max 5 pages))* *(**50pts**)*