Project Team Members:

- Bingnam Zhou
- Doug Weisse
- Prerakbhai Bhakta
- Leonardo Ramirez
- Mayank Saboo

Project Liaison:

- Dr. Alok Nandan
- Aakash N S
- Prajwal Prashanth

Project Advisor:

- Professor Zilong Ye
Jovian – The platform for all your Data Science projects

- Provide tools necessary for Data Scientists and ML/DL Engineers.
- Provide features such as Tracking, collaboration and Automate projects.
- Share and showcase projects.

Make Jupyter notebooks sharable.

Mayank Saboo
The Jovian Extension

An API is required to connect to the Jovian website and to Commit with the extension and provide version control.

Doug Weisse
Functionality

- Commit with params and stores user's options
- Settings window: clear the API key, set default commit options, and disable the extension
- Share with friends or coworkers
- Collaborators

Doug Weisse
Development Environment / Toolchain

- **Environment Management System:**
  - Anaconda - manage the environment for the toolchain (quickly installs, runs and updates packages and their dependencies)

- **IDE:**
  - VS Code - quickly links to imported files, detects syntax errors, autocompletes

- **Testing Environment:**
  - Chrome to open:
    - Jupyter Notebook
    - JupyterLab

Bingnan Zhou
To Implement the Project

- **Programming Language**
  - Jupyter Notebook: Javascript with Python
  - JupyterLab: Typescript with Python

- **Forming the UI:**
  - jQuery + API provided by Jupyter Notebook/Lab

- **Package Manager**
  - NPM

- **JupyterLab Extension Builder**
  - JLPM - which built on top of NPM and webpack

Bingnan Zhou
Challenge 1

Learning new materials

Such as new languages, development toolchain.

Solution:
- Creates documents to summarize:
  - Key Points
  - Frequently Used Commands
  - Basic Examples

Installation
- `pip install jupyterlab`
- `brew install node`
- `Settings -> Enable Extension Manage`

Install/remove/enable/disable Extensions
- `jupyter labextension list`
- `jupyter labextension install my-extension`
- `jupyter labextension uninstall my-extension`
- `jupyter labextension enable my-extension`
- `jupyter labextension disable my-extension`

Location

`<conda_root>/envs/<env_name>/share/jupyter/lab`
Challenge 2

What if no resources/examples found on Google?

- Because JupyterLab is so new, there are very few resources or examples relating to developing JupyterLab extensions.

- Our case:
  - We want our frontend extension to communicate with Python in the backend.
    - Almost no resource related to kernel communication on Google.
    - Github JupyterLab extension use a different way to communicate with Python.
Challenge 2

What if no resources/examples found on Google?

- **Solution:**
  - Reading the JupyterLab source code
    - VS Code helps a lot when I was reading the code.
      - Quickly links to required files, functions, classes, interfaces and even defined types.
  - Created a new module
    - Hides the complex technical details
      - Convenient for everyone
Industry Standards

Platforms use to communicate with liaison and assign responsibilities.

- **Dropbox Paper:**
  Assign weekly responsibilities and provide updates

- **Slack:**
  Direct communication with team members and liaison.

- **GitHub:**
  Contribute code to our project and code reviews.

Leonardo Ramirez
Week 3 (Sep 9 - Sep 15)

This week the team will become familiar with Git, and learn how to contribute to the jovian-py Github repository.

Meeting Notes

Date: Sep 9, 2019
Recording:
Tutorials & Resources

- Basics of HTML, CSS, JavaScript tutorial
    - Detailed reference: https://www.w3schools.com/html/
  - CSS - https://htmldog.com/guides/css/ (basic & intermediate)
    - Detailed reference: https://www.w3schools.com/css/
  - JS - https://htmldog.com/guides/javascript/ (basic & intermediate)
    - Detailed reference: https://www.w3schools.com/js/
- Basic Python tutorial (variables, functions, loops etc.):  
  - https://www.tutorialspoint.com/python/index.htm
- Jupyter notebook tutorial:  
  - https://jvn.io/aakashns/25b9e0816671423ab30e95eaa7ebaad8
- Jovian:
  - Tutorial: https://jvn.io/aakashns/903a04b17036436b843d70443ef5d7ad
  - Sample project: https://jvn.io/aakashns/10008ffb13b94dc199f9577b9da7e5fd
  - Video walkthrough: https://www.youtube.com/watch?v=xcfHIBkw65A
Responsibilities

Planning

☐ Completing the pending tasks for Week 1, 2, 3
☐ Review & sign off on the work plan (2.5-3 months) @Aakash N @Prajwal P

Tasks

☐ Go through CONTRIBUTING.md https://github.com/jvn-io/jovian-py/blob/master/CONTRIBUTING.md
☐ Set up development environment using condo as described in contributing.
☐ Take up tasks
  ○ Document Jovian Jupyter extension on the docs site - @Prerak b
  ○ Document jovian.reset - @Douglas W
  ○ Go through examples of Jupyter notebook extension examples (4-5) - @Bingnan Z
  ○ Go through Jovian’s notebook extension - @Leonardo R
  ○ Research about creating a jupyter lab extension - @Mayank S

Leonardo Ramirez
Work in Progress

- Change disable button to dropdown button
- Share dialog
- Add Jovian to JupyterLab
- Documenting code and how to use Jovian

Prerakbhai Bhakta
Future Plans

- Add Setting dialog
- Add Sidebar to Jupyter Notebook and JupyterLab
Settings Dialog/Module

- Commit with default options
- Change commit options
- Disable
Sidebar Module

Prerakbhai Bhakta
Read More...

Find more information on the website:

jovian.ml

Documentation:

jovian-py.readthedocs.io

Prerakbhai Bhakta