**MyPics**

**Initial Idea**

Interactive dashboard to look for images uploaded by other users.

**System objectives**

* Show the dashboard with most popular images and images uploaded by followed users
* Manage user authentication
* Show a page related to users’ profiles containing all the images uploaded by them
* Allow users to upload, search and see images
* Allow users to follow other users to easily access their user profile and images

**Distributed Software Application with Containerization**

* **Front-end layer**:
  + Login/registration page
  + Homepage
  + User profile page
  + User settings page
  + Image visualization page with description and comments
  + Image upload page
* **API layer**: RESTful Web Server acting as a gateway secured with authentication
* **Logic layer**:
  + Communication with the API gateway is done through RPC
  + Microservice for user management: handles registration/authentication/access to the user profile
  + Microservice for notifications: allows the user to be notified about new likes or new comments on his images
  + Microservice for images management: handles the upload/visualization/modification/deletion/saving of images
  + Microservice for social part: allows the user to like/comment an image and follow another user
  + Microservice for images search: handles the search of an image
* **Persistence layer**: PostgreSQL database

Each element of this list represents a different Docker container of the system and all the containers are orchestrated using Docker Compose.

**Potential Users**

* People interested in discovering images from people that they follow
* People interested in uploading and sharing images

**Use Cases**

* User can register to the app
* User can login into the app
* User can search for an image
* User can visualize the home page containing most popular images and the images published by followed users
* User can upload an image
* User can save an image
* User can edit an uploaded image
* User can remove an uploaded image
* User can like/dislike an image
* User can comment an image
* User can get notified if another user likes/dislikes one of its images
* User can get notified if another user leave a comment on one of its images
* User can follow/unfollow another user
* User can access its own profile to visualize his images and the ones that he saved from other users
* User can access its own profile to manage it
* User can access another user profile to view his details and his published images
* User can logout
* User can delete its account