Springboard--Data Science Career Track
Capstone Project 2
Identifying Bone X-rays
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- **What is the problem you want to solve?**

The goal of this project is to differentiate normal from abnormal X-rays of hands in X-ray radiographs

- **Who is your client and why do they care about this problem? In other words, what will your client do or decide based on your analysis that they wouldn't have done otherwise?**

My clients are radiologists working in the healthcare industry. The goal of the project is to develop a model that would help a clinical assistant be able to take a previously unseen X-ray image and link it directly to previous cases. By doing this, a clinical assistant can offer suggestions on possible treatment. This model can also be used in parts of the world where access to skilled radiologists is limited.

- **What data are you using? How will you acquire the data?**

The dataset is Stanford's MURA Dataset. This is a large database of labelled X-ray images of bones . The dataset is provided to individuals upon request.

- **Briefly outline how you'll solve this problem. Your approach may change later, but this is a good first step to get you thinking about a method and solution.**

My current vision is to train a Deep Learning Convolutional Neural Network (CNN) to identify differences with normal and abnormal bones. The model will be a binary classification one, identifying whether an X-ray is normal or abnormal.

- **What are your deliverables?**
    i. Project Proposal
    ii. Python Code developed as Jupyter notebooks for all the phases of the project
    iii. Two Milestone Reports
    iv. Final Report
    v. Slide Deck