AI Biotech Pipeline

NYCDSA Project 1: Web scraping
Isabel Alvarez de Lugo

The Data
Background knowledge of datasets

- BenchSci - Toronto based - uses AI to empower scientists to run more successful experiments to accelerate drug discovery.
- Simon Smith - CSO at BenchSci - combiled two blog post using data from Crunchbase

Dataset 1: **Drugs in the AI in Drug Discovery Pipeline Dataset**
Last Updated Jun 24, 2020
117 unique drugs - 262 unique variations

Dataset 2: **230 Startups Using AI in Drug Discovery**
Last Updated Jun 24, 2020

Purpose
Why do we care?

- My goal was to use **descriptive analytics** to try to understand and describe **AI biotech startups trends** domestically and globally.
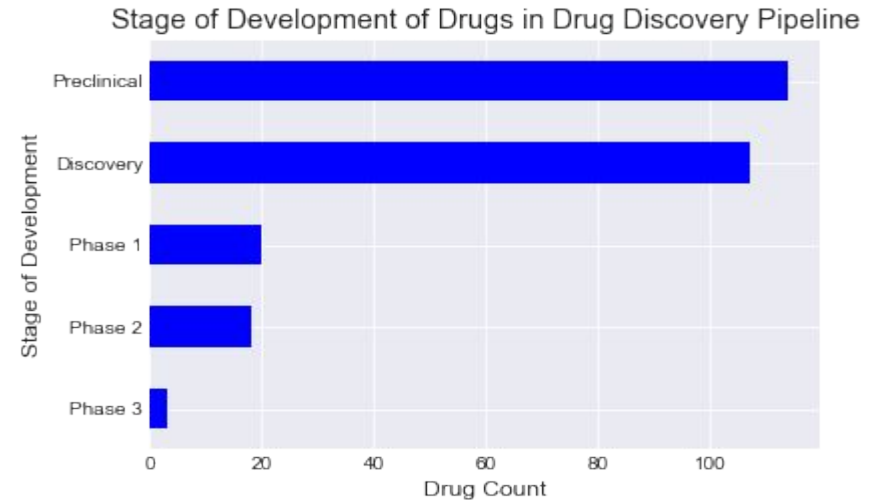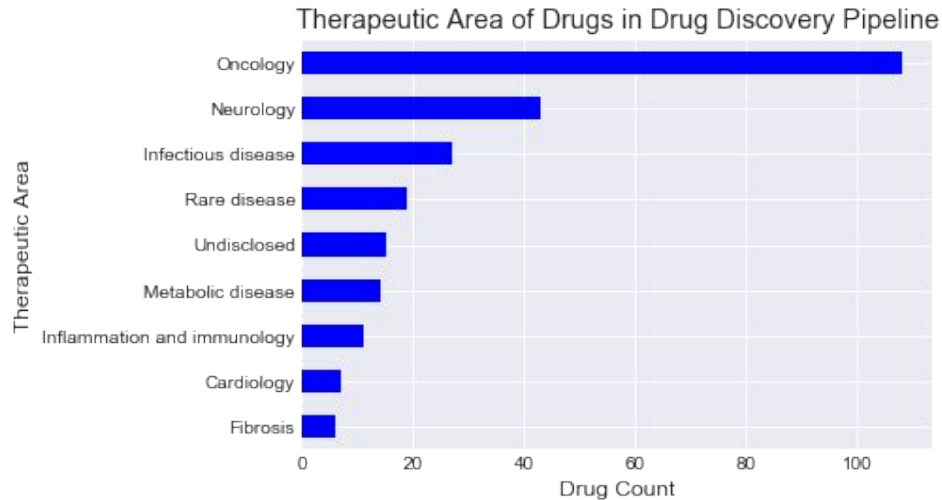
Questions

Research questions of interest: what do you want to find out?

- **In what therapeutic area are the drugs in the AI in Drug Discovery Pipeline mostly in?**
    - **Does this differ between countries?**
- **What stage are they in?**
- **Have more AI startups been founded in recent years/has it peaked already?**
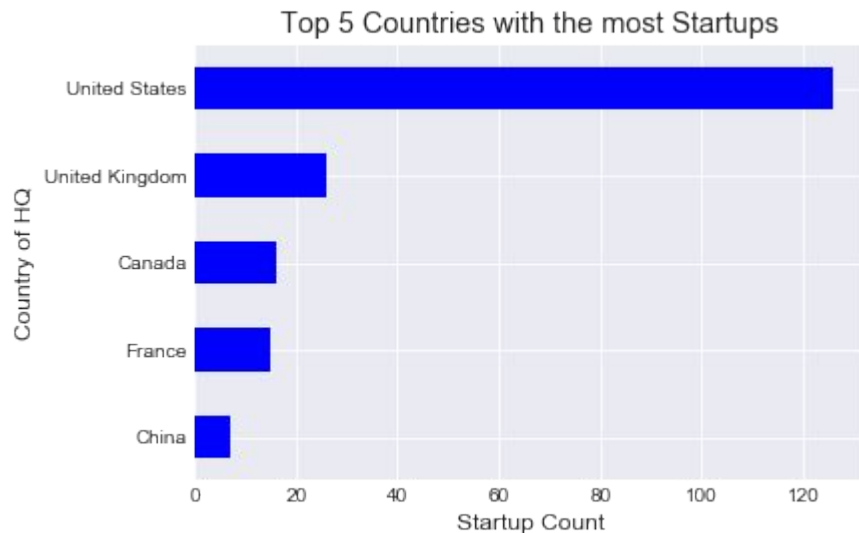   - **How has the peak varied between countries?**

AI in Drug Discovery Pipeline:
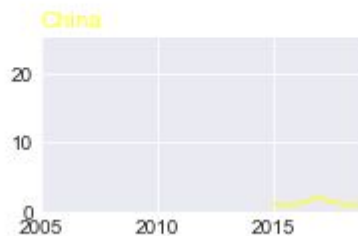
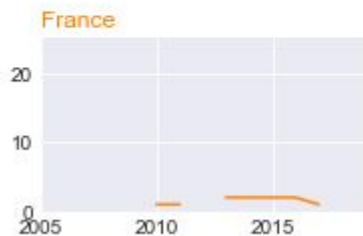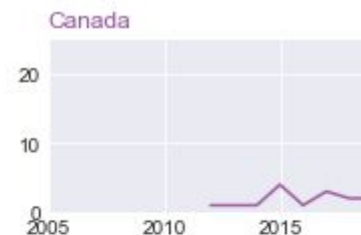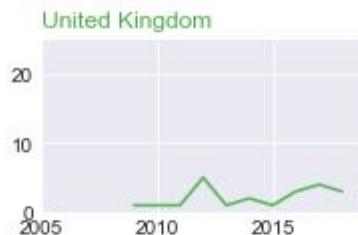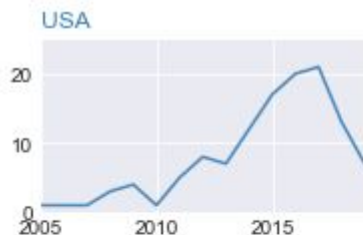Dataset 1: Drugs in the AI in Drug Discovery Pipeline Dataset

Startups Using AI in Drug Discovery Trends

Dataset 2: 230 Startups Using AI in Drug Discovery

Top 5 Countries with the most Startups

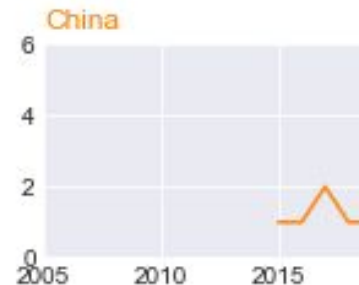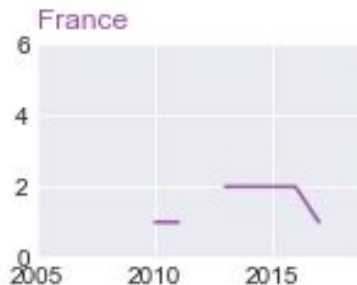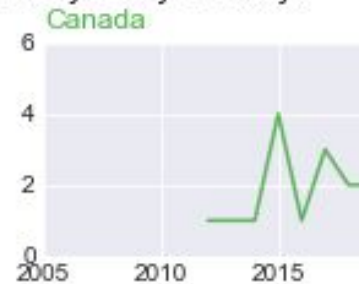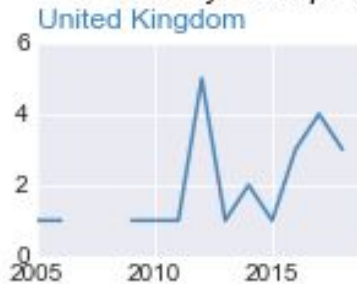# Companies founded 2005-2019 by country

Dataset 2: 230 Startups Using AI in Drug Discovery
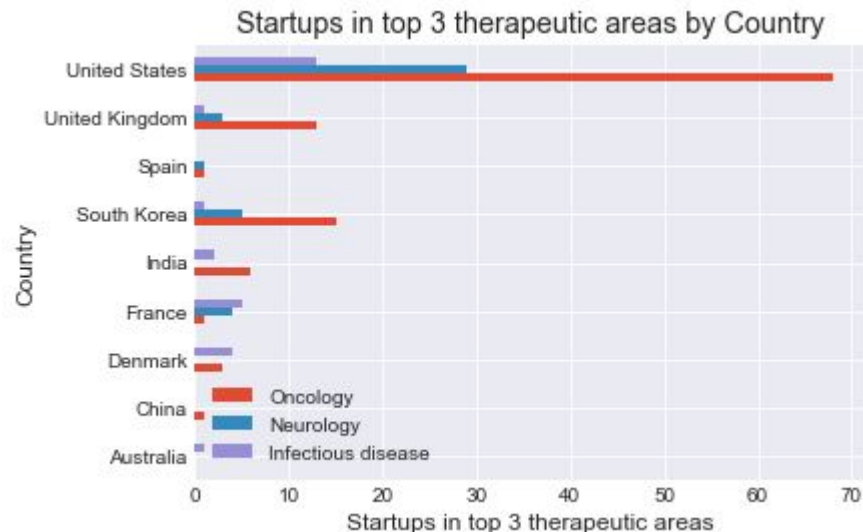
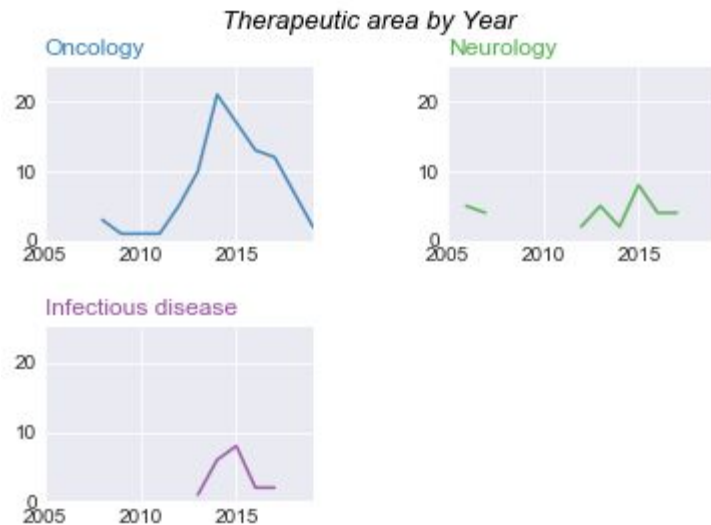# Companies founded 2005-2019 by country

Dataset 2: 230 Startups Using AI in Drug Discovery

How many startups founded each year by Country?

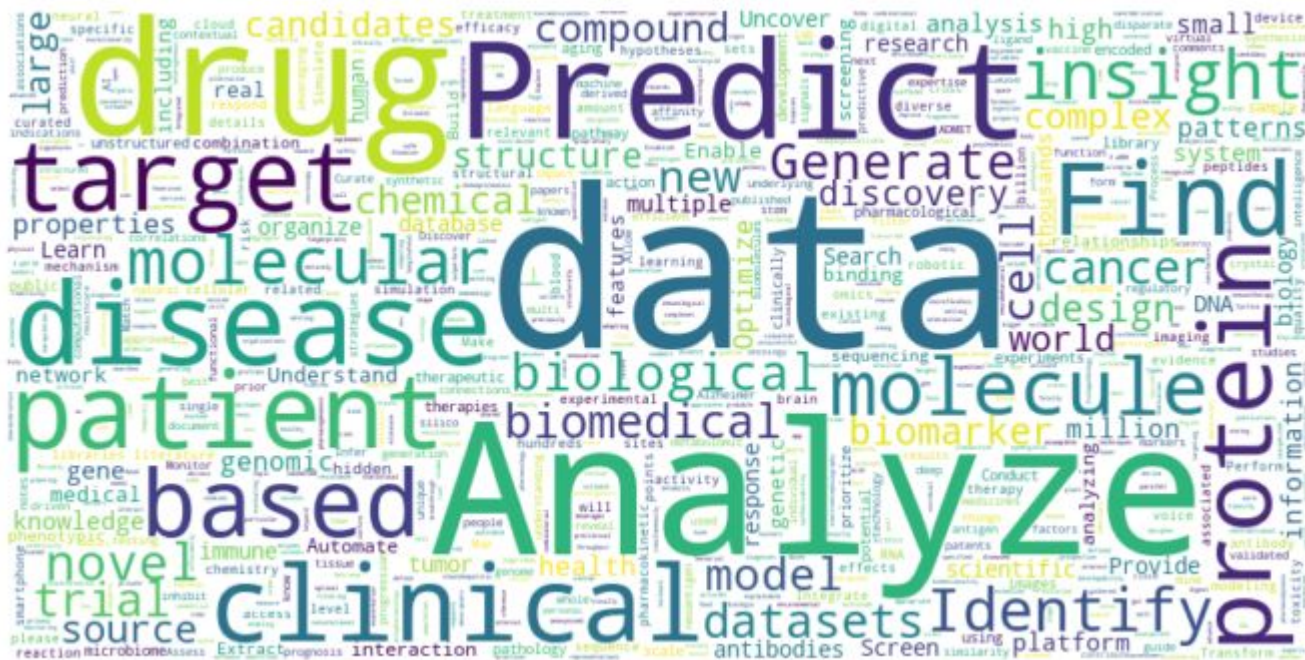# Top 3 Therapeutic Areas by Year and Country

Merge of Datasets

Startups' Purpose

Dataset 2: 230 Startups Using AI in Drug Discovery

Startups' Use

Dataset 2: 230 Startups Using AI in Drug Discovery

Explanation of future work:

More in-depth look at the impact

- Pull more data on:
    - Funding (Private/Public)
    - Job created / team size
    - Real Estate
    - Diversity of teams

Thank you

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Data sourced from BenchSci
https://blog.benchsci.com/drugs-in-the-artificial-intelligence-in-drug-discovery-pipeline
https://blog.benchsci.com/startups-using-artificial-intelligence-in-drug-discovery

Link to GitHub:
https://github.com/isa-adl/project1