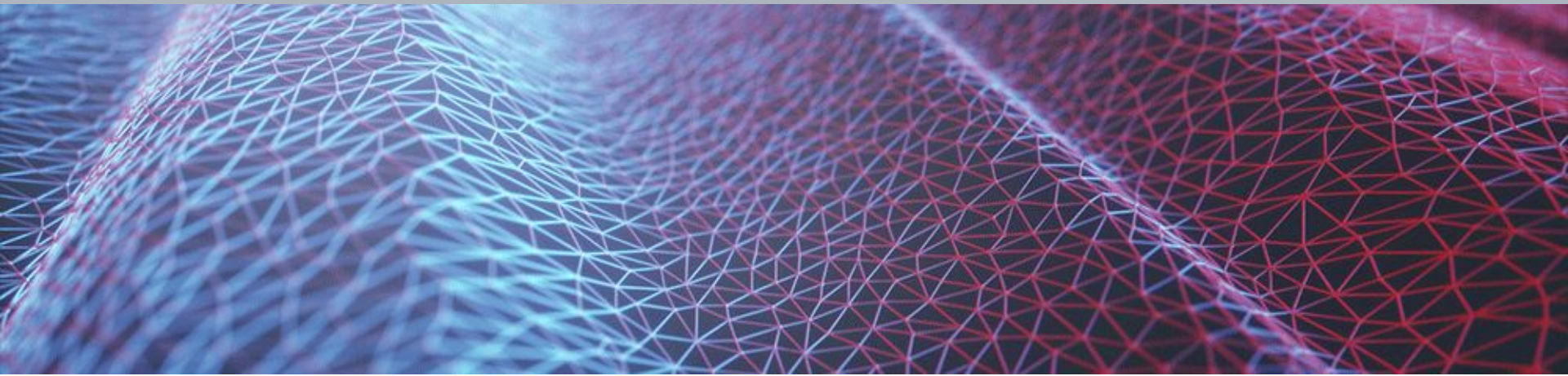
AI Skunkworks in the NHS



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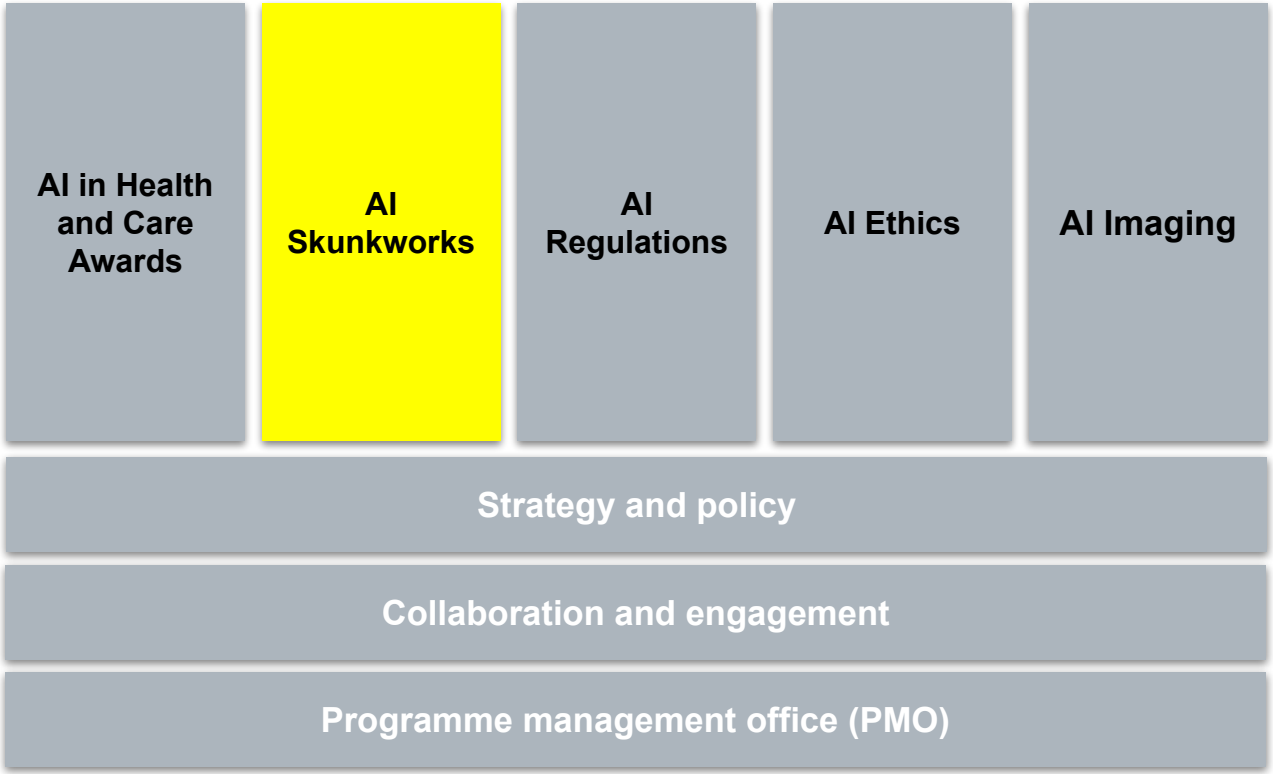
AI Skunkworks in the NHS AI Lab



The original Skunk Works

AI Skunkworks: vision

Organisations in the health and care system are able, **through practical experience**, to understand, build, buy, deploy, support and challenge AI solutions.

Hospital Long Stayers Forecasting

LTSS Prediction

localhost:8080/#/forecast/0

Guest

NHS Gloucestershire Hospitals NHS Foundation Trust

POLYGEIST

Go back

NHSX Long Stayers AI Risk Stratification Modelling

Patient Forecast

Patient Record #0

Explorative Forecast

This forecast is based on edited patient data, to retrieve the original patient record and forecast select 'Re

Reset Record | Generate New Forecast

Personal

Age On Admission	37
Ethnic Category Code Description	Not Stated
Local Patient Identifier	[redacted]
Patient Gender Current	Male

Admission

Admission Method Hospital Provider Spell Description	Accident And Emerger
Ae Arrival Mode	Friend / Relative Drop
Ae Attendance Category Code	First ED Attendance

The risk stratification score is

Level 2

This patient has a 17% chance
a long stayer

The AI model predicts this patient will stay for:

1 days

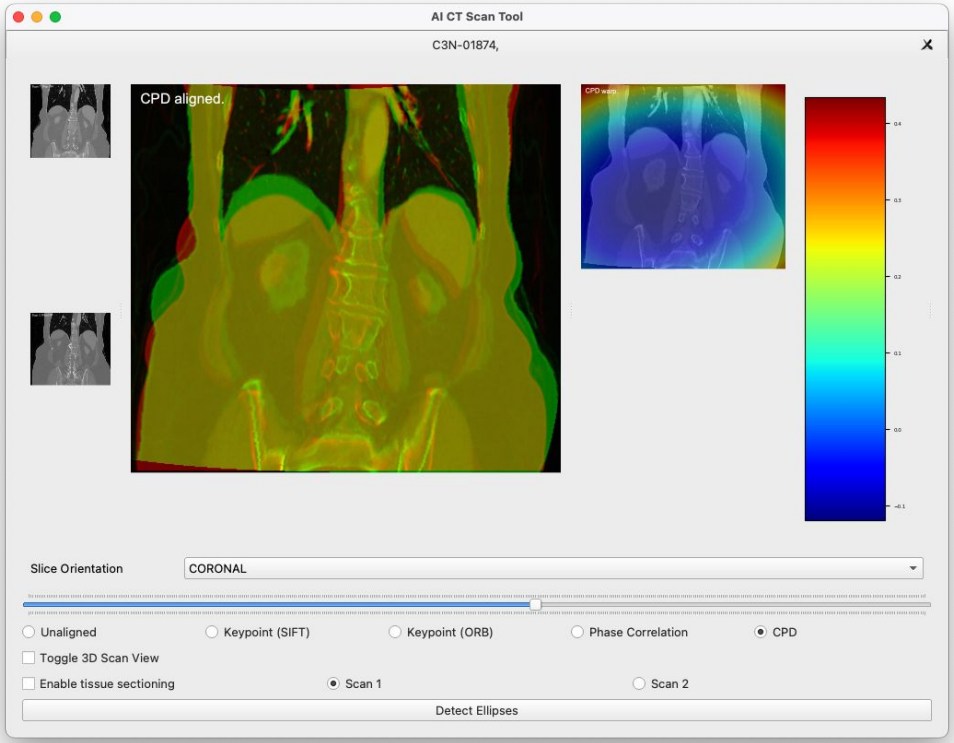
The patient should be medically optimised after:

The risk stratification score is currently at:

Level 2

This patient has a 17% chance of becoming a long stayer

Automatic lesion detection and CT scan alignment



How we work

What we offer to our NHS partners

- Agile **12-week projects** in co-production with suppliers to deliver a proof-of-concept / MVP
- A ‘SWAT’ **capability** to help NHS Trusts directly, hands-on
- **Deep dives, consultancy, advisory** service through our team

What we achieve

- Address a **local problem**
- Foster **collaborations and community**
- Share **knowledge**, open source code

Open source, open knowledge

Predicting long hospital stays with Gloucestershire Hospitals

In this project we used admission data and pseudonymised patient records to investigate whether artificial intelligence machine learning methods could identify the patients most at risk of becoming "longstayers" (hospital stays of more than 21 days).

Read more about the long stayers project

Developing the health data search engine, Data Lens

In this project, we applied Natural Language Processing (NLP) and other AI technologies to test a prototype data search tool that would be a universal search engine for health and social care data catalogues and metadata.

Read more about Data Lens

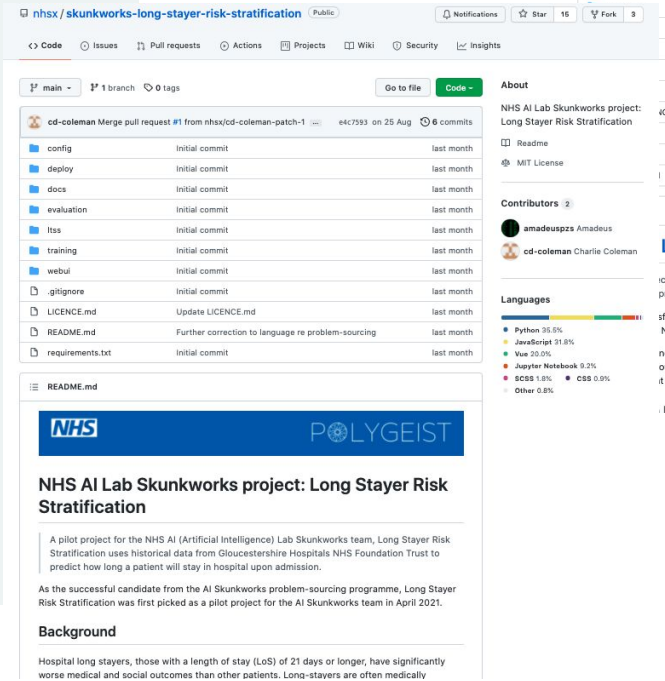
Predicting negligence claims with NHS Resolution

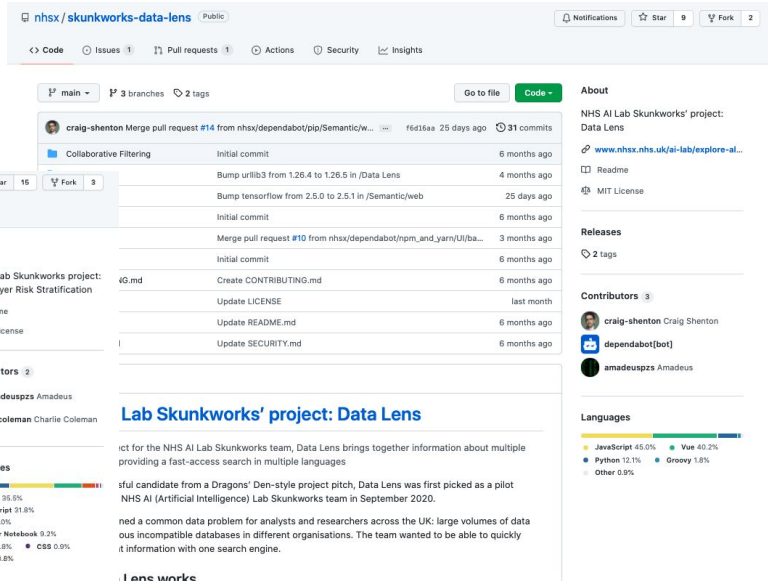
This project investigated whether it is possible to use machine learning AI to predict the number of claims a trust is likely to receive and learn what drives them in order to improve safety for patients.

Read more about the NHS Resolution project

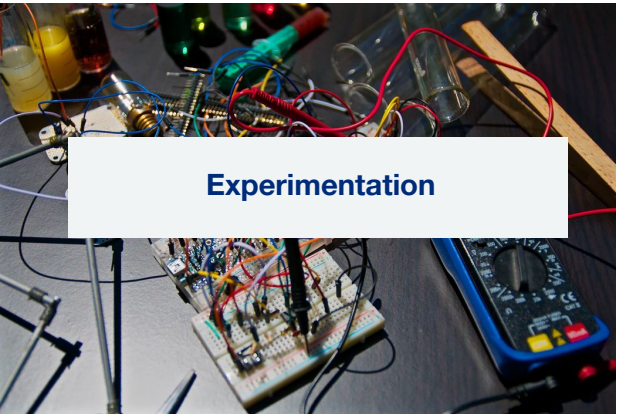
Identifying features in CT scans with George Eliot Hospital

This challenge was suggested by a team at George Eliot Hospital who wanted to speed up the analysis of computerised tomography (CT) scans to free up radiologists' time and help identify tissue growth.





AI Skunkworks



Test Learn Share

Thank you

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