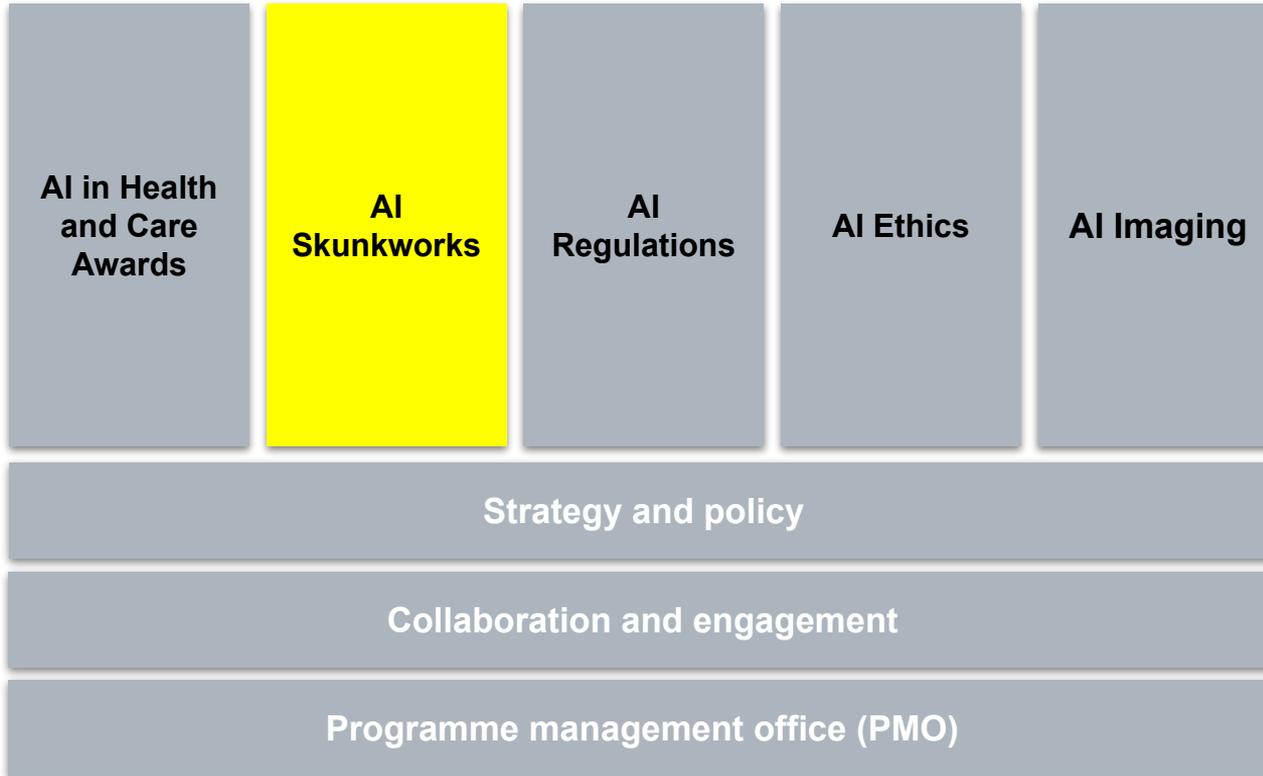


AI Skunkworks in the NHS



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The original Skunk Works

NHS^x



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

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	Not Stated
Description	
Local Patient Identifier	██████████
Patient Gender Current	Male

Admission

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

The risk stratification score is currently at:

Level 2

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

The risk stratification score is

Level 2

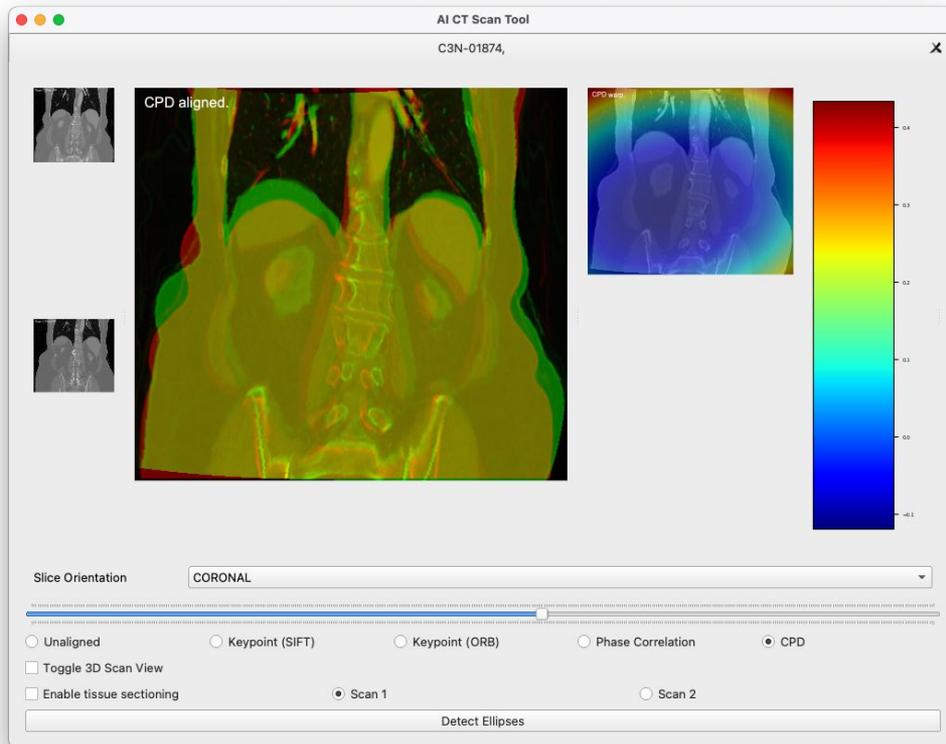
This patient has a 17% chance a long stayer

The AI model predicts this patient will stay for:

1 days

The patient should be medically optimised after:

Automatic lesion detection and CT scan alignment



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.

GitHub repository for NHS AI Lab Skunkworks project: Long Stayer Risk Stratification. The repository is public and contains 6 commits. The file list includes:

- cd-coleman Merge pull request #1 from nhx/cd-coleman-patch-1
- config Initial commit
- deploy Initial commit
- docs Initial commit
- evaluation Initial commit
- its Initial commit
- training Initial commit
- webui Initial commit
- .gitignore Initial commit
- LICENCE.md Update LICENCE.md
- README.md Further correction to language re problem-sourcing
- requirements.txt Initial commit

NHS AI Lab Skunkworks project: Long Stayer Risk Stratification

A pilot project for the NHS AI (Artificial Intelligence) Lab Skunkworks team, Long Stayer Risk Stratification uses historical data from Gloucestershire Hospitals NHS Foundation Trust to predict how long a patient will stay in hospital upon admission.

As the successful candidate from the AI Skunkworks problem-sourcing programme, Long Stayer Risk Stratification was first picked as a pilot project for the AI Skunkworks team in April 2021.

Background

Hospital long stayers, those with a length of stay (LoS) of 21 days or longer, have significantly worse medical and social outcomes than other patients. Long-stayers are often medically

GitHub repository for NHS AI Lab Skunkworks project: Data Lens. The repository is public and contains 31 commits. The file list includes:

- craig-shenton Merge pull request #14 from nhx/dependabot/pip/Semanticw...
- Collaborative Filtering Initial commit
- Bump urllib3 from 1.26.4 to 1.26.5 in /Data Lens
- Bump tensorflow from 2.5.0 to 2.5.1 in /Semantic/web
- Initial commit
- Merge pull request #10 from nhx/dependabot/npm_and_yarn/Ui/ba...
- Initial commit
- Initial commit
- Create CONTRIBUTING.md
- Update LICENCE
- Update README.md
- Update SECURITY.md

Lab Skunkworks' project: Data Lens

ict for the NHS AI Lab Skunkworks team, Data Lens brings together information about multiple providing a fast-access search in multiple languages

ful candidate from a Dragons' Den-style project pitch, Data Lens was first picked as a pilot NHS AI (Artificial Intelligence) Lab Skunkworks team in September 2020.

ned a common data problem for analysts and researchers across the UK: large volumes of data often incompatible databases in different organisations. The team wanted to be able to quickly it information with one search engine.

l one work

About NHS AI Lab Skunkworks' project: Data Lens

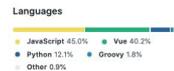
- [www.nhs.uk/ai-lab/explore-ai...](#)
- Readme
- MIT License

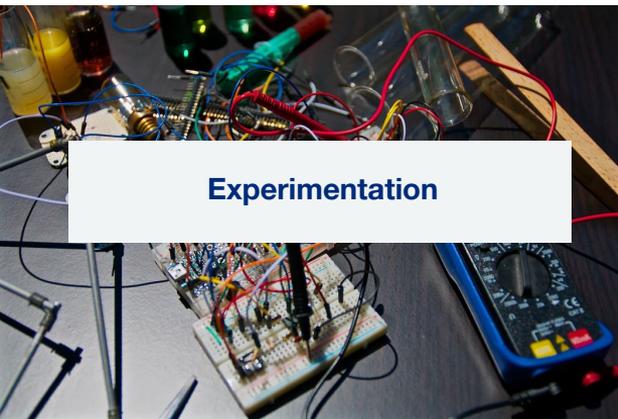
Releases

- 2 tags

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Test Learn Share

Thank you

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