

AI-Driven Swift Detection & Accurate Analysis of Drug Side Effects

for Enhanced HCP Response in Outbound Contact Centers

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Objectives:

To ideate an outline and method-build an Artificial Intelligence (AI)-driven outbound contact center by combining medical image processing and Natural Language Processing (NLP), empowering quick and accurate detection of visual adverse drug events.

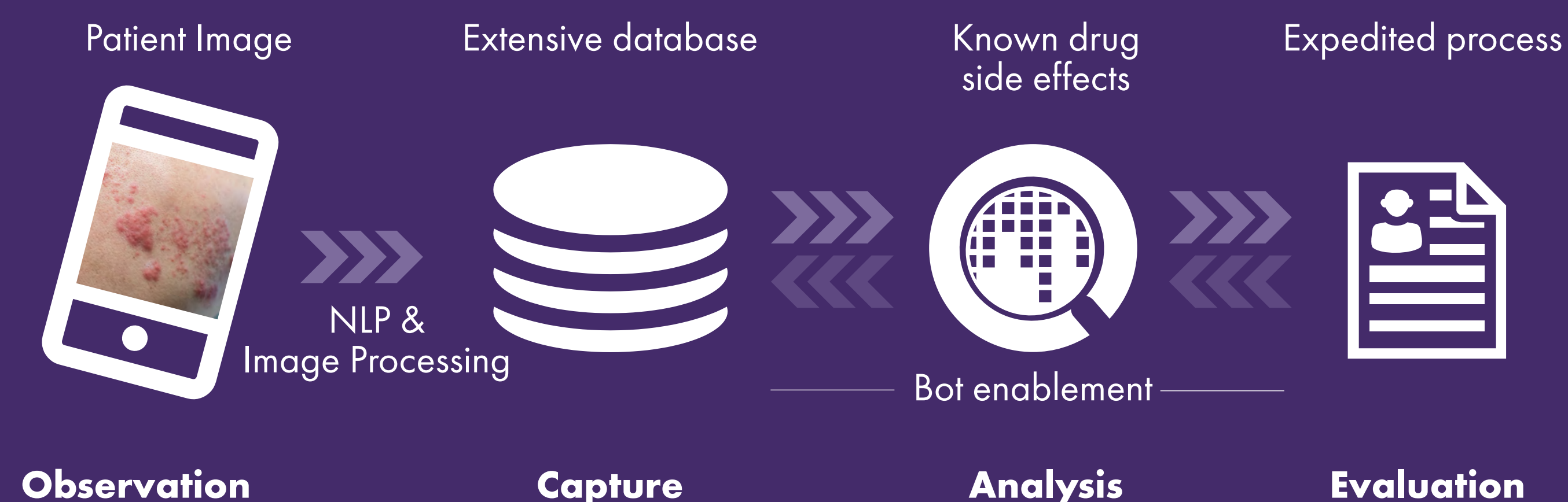
Methods:

A literature search was conducted to identify AI tools pertinent to visual side effect categorization that would be appropriate for patient-submitted images during Adverse Event (AE) reporting. Reviewed works include those on detecting visual side effects of skin conditions and diseases through "image processing" and "image segmentation."¹⁻³ The exploration of these established methodologies informed the workflow design for developing an app or intelligent bot.

Results:

Based on a literature search, the ideation process envisioned an AI system demonstrating exceptional proficiency in identifying a wide array of visual adverse drug reactions, including rashes, necrosis, Steven-Johnson Syndrome, and more.

AI Detection & Analysis Process Flow



The method envisioned would operate by analyzing patient-submitted images against an extensive database of known drug side effects. Advanced techniques in pattern recognition and image processing are hypothesized to facilitate and expedite the Health Care Provider's (HCP's) analytical process, providing an initial evaluation of the side effect. The entire process could be enabled by an intelligent bot, designed to interact with the results and the necessary additional information library. This process would apply NLP for analyzing patient responses, potentially enhancing the speed and accuracy of detection. Initial testing of the image processing and pattern recognition indicates that the AI system envisioned could have the capacity to handle large volumes of patient data representing a significant advancement over traditional side effect reporting methods.

Conclusions:

The conceptualization of an AI-driven outbound medical contact center would be a pivotal advancement in healthcare, significantly enhancing patient safety and communication. The ideation process behind this system, with its rapid and precise detection of adverse drug reactions through image analysis, could revolutionize patient care and offer a superior alternative to traditional methods. Its interactive capabilities for gathering additional patient information streamline the detection process, ensuring healthcare providers receive detailed, prioritized data for timely interventions.

Next steps:

A comprehensive test of the process described herein by implementing a full-scale pilot study with a client-partner.

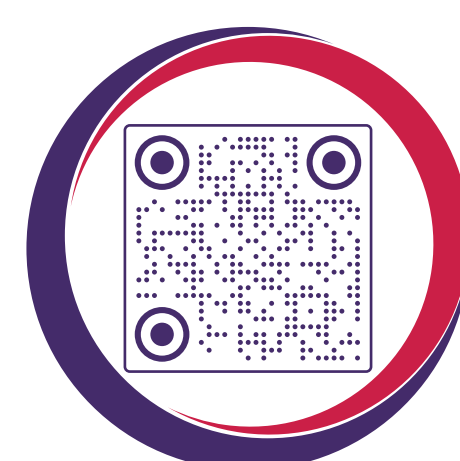
Disclosures:

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References:

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Footnotes: AI - Artificial Intelligence; NLP - Natural Language Processing; AE - Adverse Event; HCP - Health Care Provider

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