

Enabling the development and deployment of computer vision algorithms for any target in any environment.



OVERVIEW

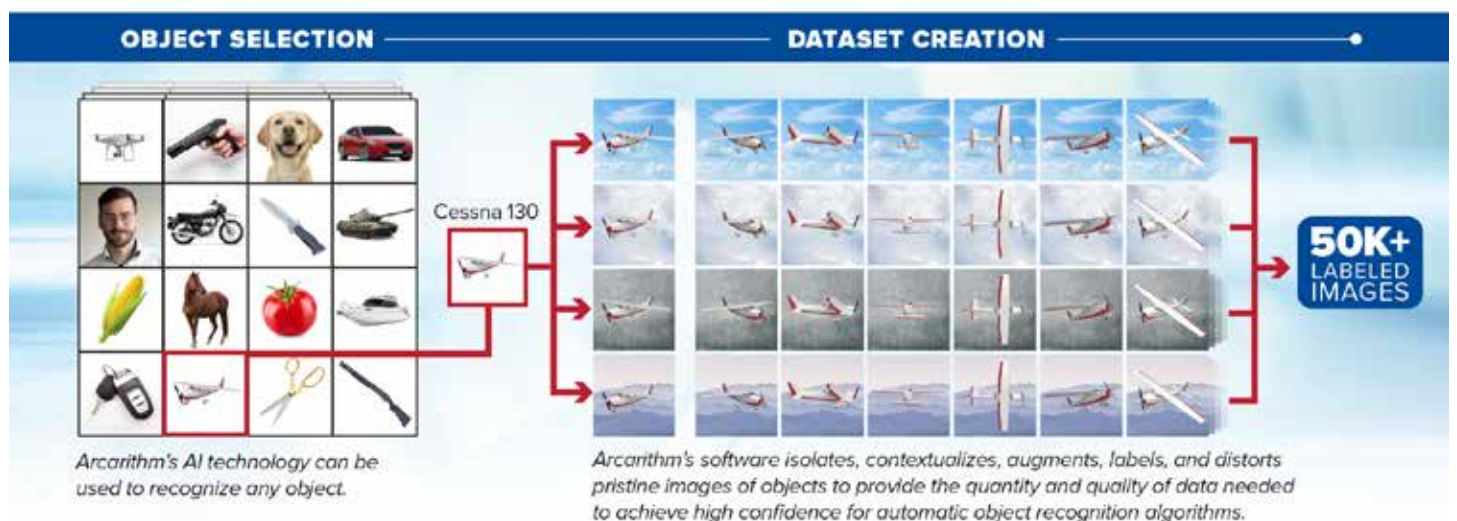
Countless computer vision models suffer defeat in attempting to bridge the proof-of-concept to production gap. This leads to state-of-the-art networks and algorithms failing or numerous false positives when deployed in the real world. The culprit is bad data. Data remains one of the most significant milestones in AI development often taking up to 80% of the actual development time to get a model ready for deployment. Arcarithm's innovative data creation and curation capabilities help data scientists and AI developers overcome these challenges. Arcarithm offers highly robust, fully annotated data sets that are training ready and performance proven.

TECHNICAL

Arcarithm's Data Services enable AI designers to build highly robust computer vision algorithms for every application with custom fully-labeled data sets. Arcarithm provides high quality data of any target of interest as isolated target

images for every angle, as simulated real-world images of targets in various environments, or as a fully labeled and augmented data set that can be used out-of-the-box to train field-ready computer vision algorithms.

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TECHNICAL (CONTINUED)

Arcarithm’s Data Services uses proprietary data creation and augmentation tools and techniques that allow targeted collection of images with complete control of all relevant variables. Unlike current data collection and augmentation techniques, Arcarithm’s process provides active control of variables such as lighting, weather effects and background scenes that are difficult to produce. We start with the identification of the target(s) of interest for the data set and the wavebands in which the targets will be observed. We then identify the possible conditions in which the AI computer vision will need to operate to select a set of augmentations that simulate this environment. Arcarithm’s computer vision scientists use this information to create the data set and deliver with a data set quality report.

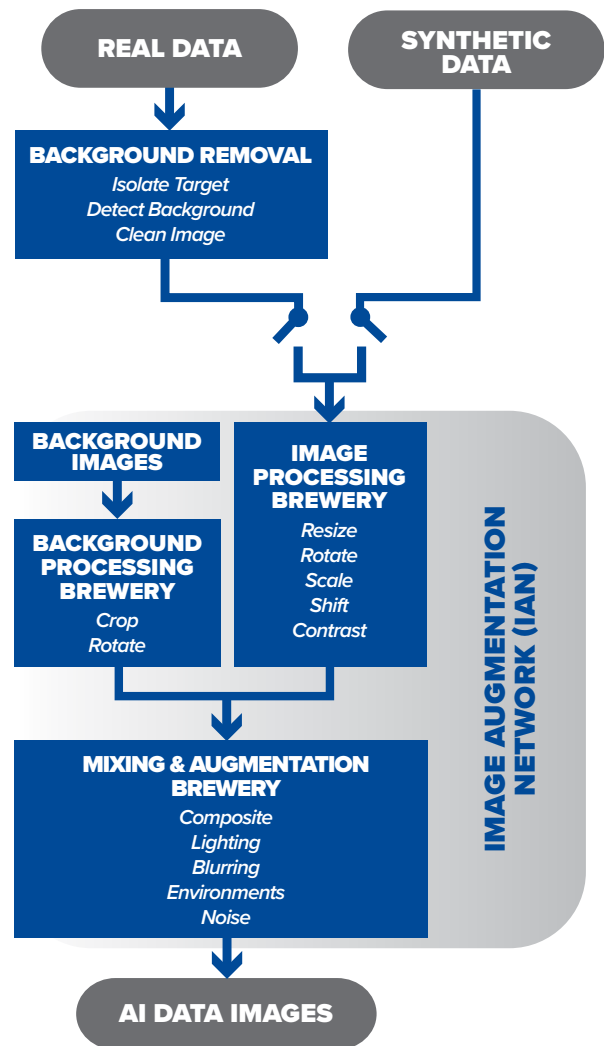
Automated labeling with Arcarithm’s advanced computer vision data pipeline.

Reliable computer vision algorithms require significant amounts of labeled data for training. Creation and curation of this data takes time as it often requires extensive trial and error or guess work to determine the best qualities of the data that lead to success. Arcarithm’s Data Services removes the guesswork. Our AI scientists analyze the customer’s objectives to develop the right data set for each specific use case the first time. Arcarithm’s custom data sets are created for any target of interest, in infrared and visible wavebands, at all angles to provide data for every possible scenario. Our custom data sets provide realistic scenes of targets of interest in relevant environments and apply a select combination of augmentations and degradations to the resulting images to produce the type of backgrounds and augmentations encountered in the field.

LOGISTICS & LICENSING

Arcarithm’s data sets are available for purchase for commercial and private use. Data sets purchased from Arcarithm can only be used as is stipulated in the end-user-license agreement (EULA) regarding data storage, use, re-use, and re-sell. There is no limit to the number of data sets that can be purchased by a user. Data set images are delivered in standard image formats and may be available in proprietary formats for an additional fee.

Arcarithm’s Advanced Computer Vision Data Pipeline



ABOUT ARCARITHM

Deep Learning and Artificial Intelligence (AI) are buzz words commonly used throughout defense and commercial markets, often without true understanding of those terms. At Arcarithm, we are defining those terms and more, with proven solutions on par with multinational tech leaders. From the big picture distinction between strong and weak (or narrow) AI, to the fine-grained focus of deep versus shallow neural networks, Arcarithm delivers a depth of understanding and operational maturity beyond the capability of most companies. Our experience with every aspect of algorithm design, training, deployment and evaluation allows Arcarithm to produce quality products quickly and effectively, with the highest levels of reliability and accessibility.



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