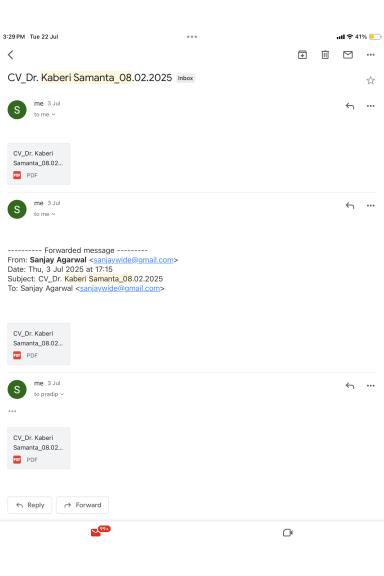
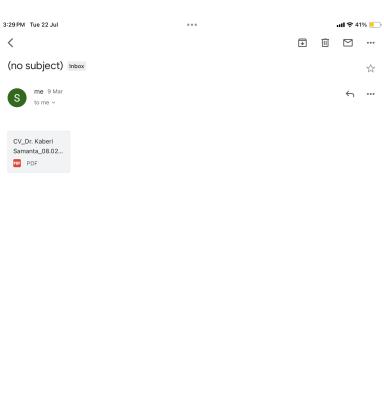
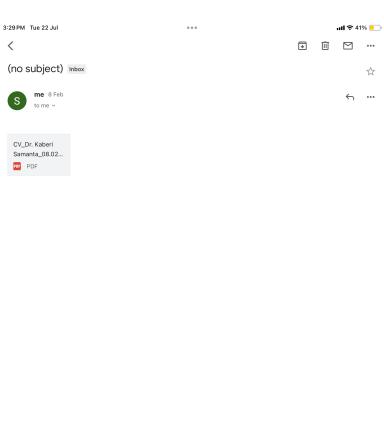


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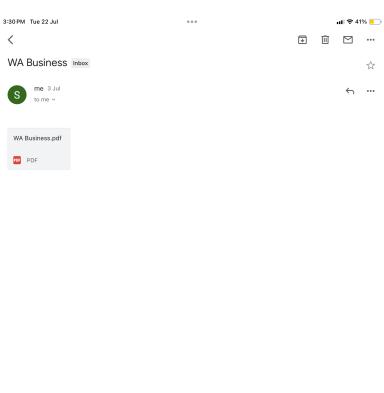
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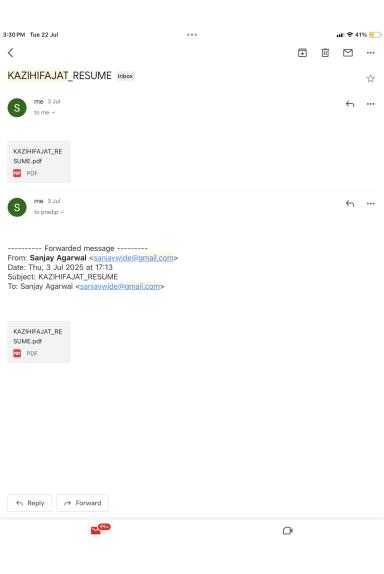






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Extracted and preprocessed MAp Inbox



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Tanya Gupta 25 Feb

Kindly find the attached jpg you asked for. For reference I have attached the base map also. MAP NO- R0207070\_5

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## Dhananjay Agarwal 25 Feb

Thank you. Sent from my iPhone On Feb 25, 2025, at 3:01 AM, Tanya Gupta <tanyagupta8942@gmail.com> wrote: <vector\_...



Dhananjay Agarwal 25 Feb

to Tanya, dsantanu1989, Samanta, me, kazihifajat92 v



## Hi Tanya:

Thanks for sending me the vector files. Both the methodologies use different approaches to generate the vector outputs and both face similar challenges of "handshakes" of the Bengali Plot Numbers. The distortions by the handshakes manifest in different ways in each of the processes. In mine, it distorts the lines and in the sample you sent me it creates additional branches. By handshakes I mean the Bengali letter touching the wall. My process doesn't use ArcGIS (ESRI proprietary technology) and is 100% homegrown technology using open-source software.

While we can move along the path of ArcGIS and do additional validations, we need to build our product from the ground up. For the time being let's put additional testing in the ESRI route on hold, and focus on the handshake problem. That will give me more rewards for our efforts. Towards that I have created a folder on Google Drive (https://drive.google.com/drive/folders/1qPce1lmR5krKbfSq8C9qc2O8\_Goa3d5k?usp=sharing) that contains pairs of file for 11 maps.

Each pair has an isolate\_target file and an isolated file. The isolated file has the complete plot numbers where as the isolate\_target file has only the Bengali letters touching the boundaries. Both are raster files. I use the isolate\_target file in my workflow and the handshakes distort the vector lines.

The problem is how can we remove these handshakes? Let's focus on this problem. This effort will be useful in both the ArcGis process if we decide to use that route at a later time.

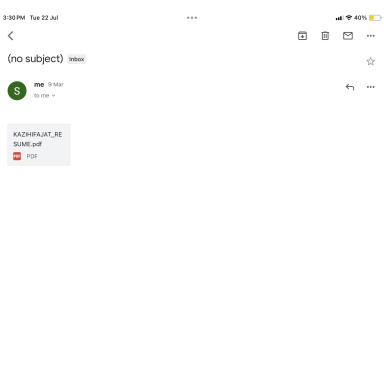
Is machine learning the best solution for the handshake problem? One experiment I want to try out is to use CNN tools. My understanding is that for CNN we need noisy and truth data, both, in raster form. We train the model using raster noisy data and truth data. The truth data can come from exporting the Plot layer from the Autocad or shape files of maps already vectorized by our company. The noisy data can come from LM v1.1 program in debug mode. We will run the older files through LM v1.1. This process will help us generate training data very quickly. In this experiment, the output is still a raster file subject to further processing.

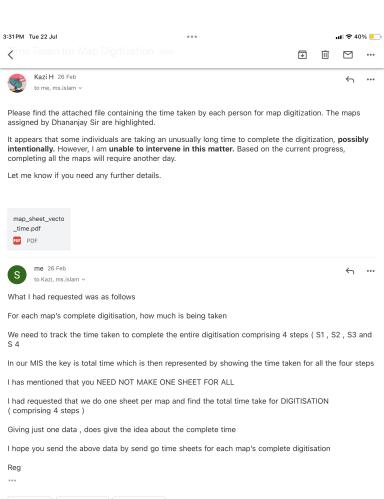
Q1. Please share your thoughts on the proposed experiment?

Q2. For truth data, can we write a script that can automatically generate raster images of plot boundaries









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