



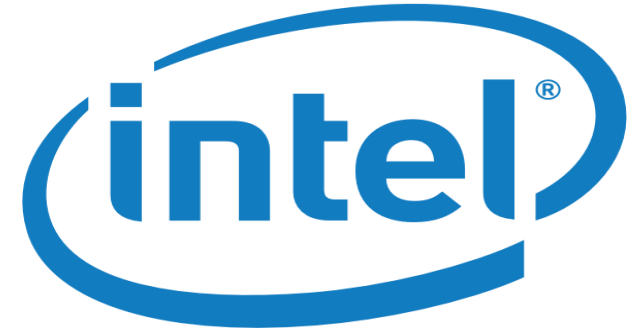
Disaster Relief using Satellite Imagery

Muhammad Abu Bakr

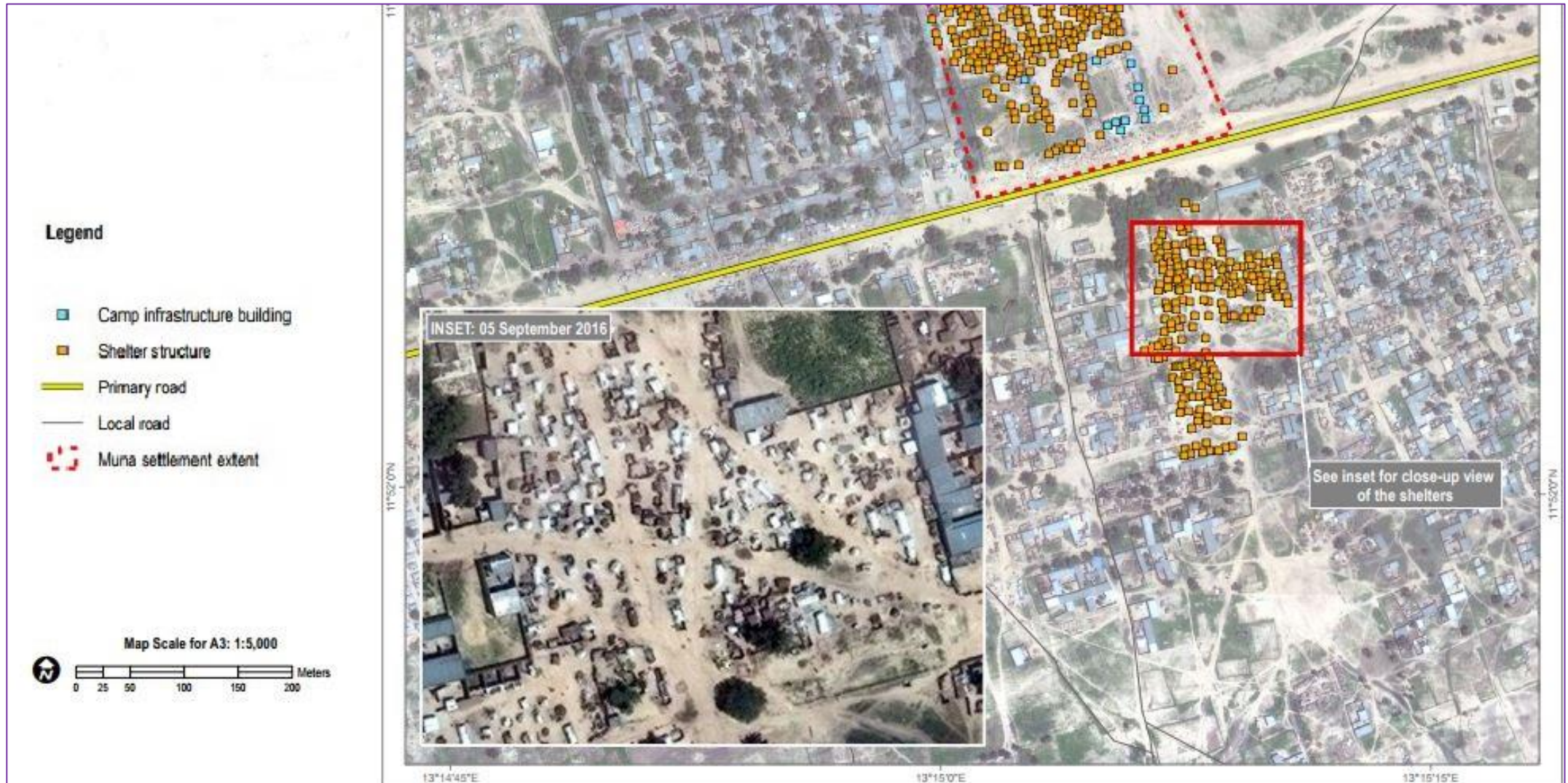
Supervisors – Taghi Aliyev, S. P. Mohanty, Lars Bromley

15/08/2017

Context



Problem



Solution

Automated Feature Classification using Machine Learning

Why not Conventional Image Processing ?

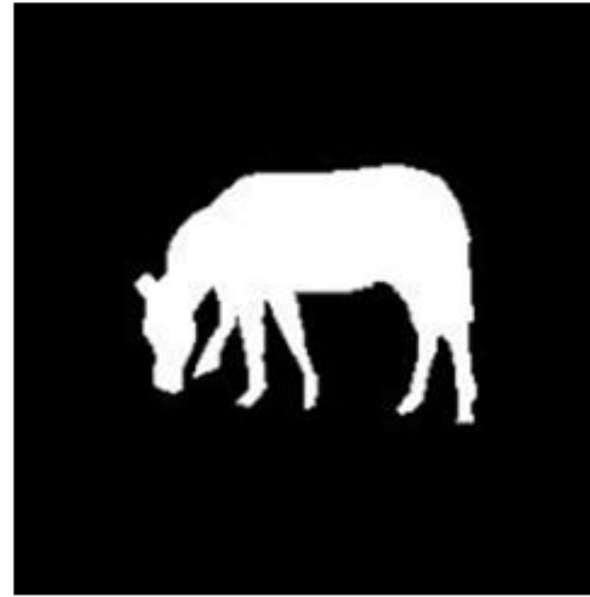
Structurally **different** Refugee Camps

Shelters have **arbitrary** Shape & Hue

Background & Shelters have **Same** Color

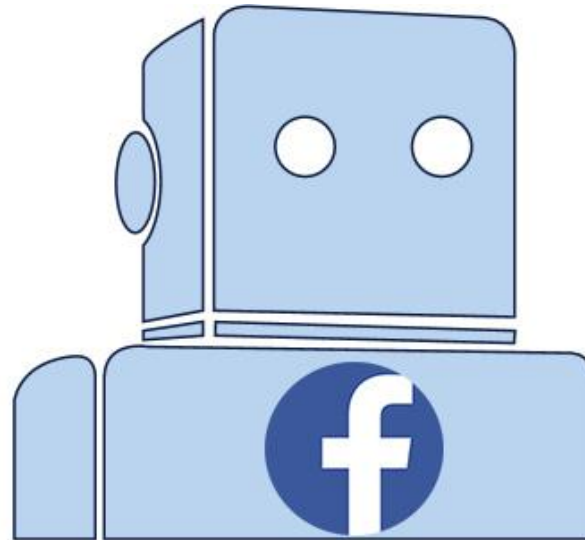
My Work

Feature Extraction Algorithms

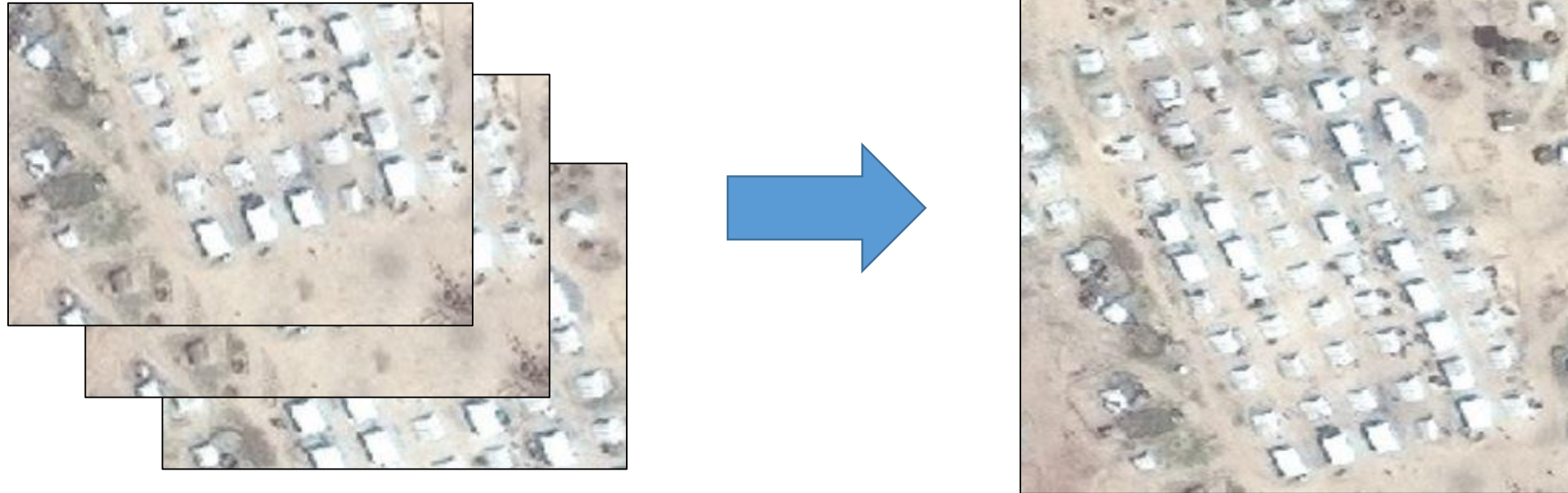


My Work

Facebook's Deepmask Object Proposal Algorithm



Pre Processing



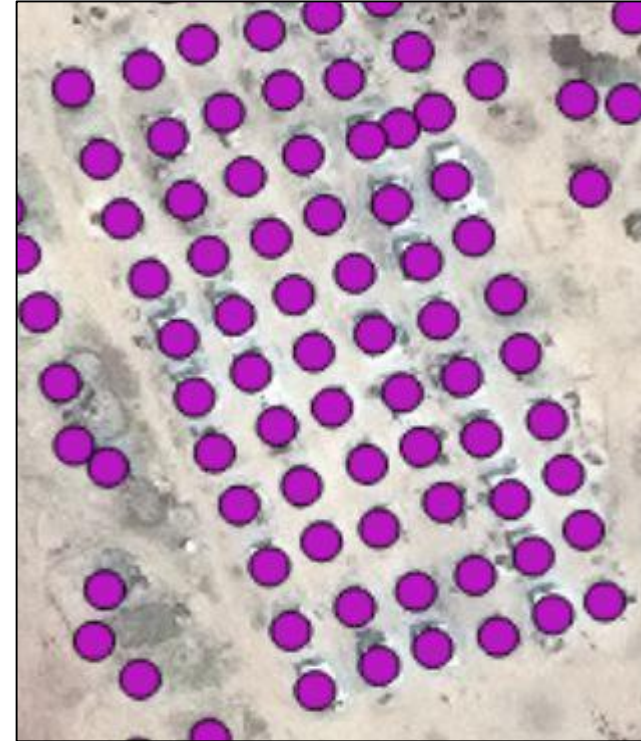
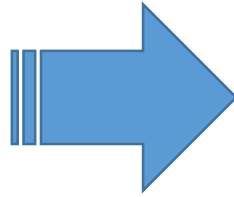
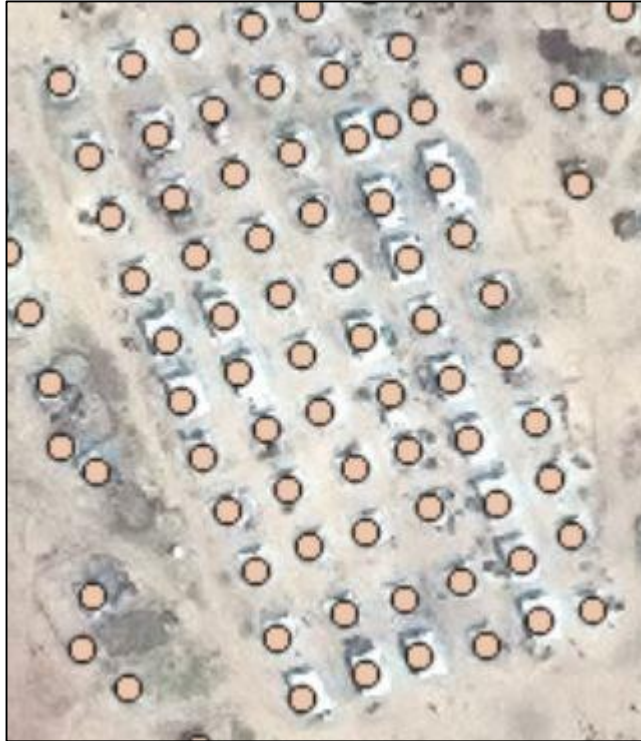
Merging Satellite Images

Pre Processing



Combining Points & Merged Sat. Image

Pre Processing



Converting Points to Polygons
Get Bounding/Enclosing Box pixels

Evaluation Results



Impact

Nearly Real-Time Tracking of Relief Operations

&

Quick Response when Required

Future Work

More Evaluation

Thank You !