

Fig. 14 Result on Number of Pixels of Pagodas

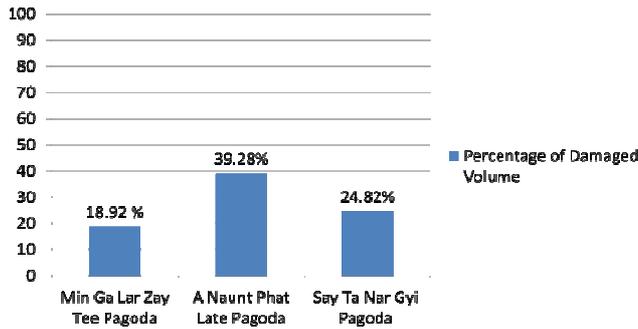


Fig. 15 Result on Percentage of Damaged Volume of Pagodas

IV. CONCLUSIONS

The proposed method for estimating the damaged volume of the 3D historic pagoda is firstly implemented in Myanmar. Most of the estimated damaged volume is emphasized in 3D buildings. This proposed system is mainly contributed to detecting the damaged portion of pagoda based on the 3D structure of the historic pagoda after the earthquake. This study aims to preserve the cultural heritage of the old pagoda. The first part of this research work consists in restoring the original structure of the tower by taking damaged images using drones; the second part is producing the required point clouds using the open-source visualSFM software and the third part is estimating the damaged volume using 3D Hough transform and nature of the ancient pagodas' structures. Though the experimental results and discussion, it can be confirmed that the proposed method works adequately.

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