

UC San Diego

Field Reports

Title

Seoul, South Korea and Osaka, Japan August 25th - September 3rd, 2025

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<https://escholarship.org/uc/item/3wb5v776>

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Publication Date

2026

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Field Report:

Seoul, South Korea and Osaka, Japan

August 25th - September 3rd, 2025



Dotonbori District, Osaka Japan

Field Report prepared Nov 10th 2025

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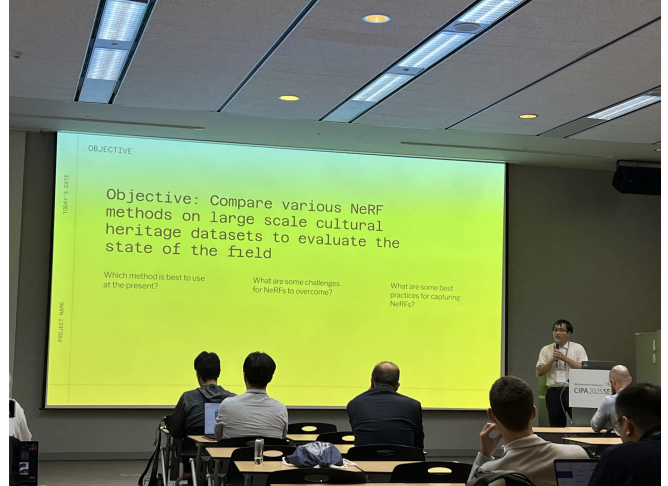
Scott McAvoy

All Cultural Heritage Engineering Initiative (CHEI) projects are performed under the direction of Prof Falko Kuester & Dr. Dominique Rissolo, at the University of California San Diego

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Expedition Overview:

It was a very hot and humid summer in the hilly city of Seoul, South Korea. CHEI members presented 7 papers at the CIPA 2025 conference hosted at South Korea's National Museum. After presenting, networking, and re-connecting with old friends, we took the opportunity to engage in fieldwork documenting old lowrise neighborhoods, slated for destruction, and capturing NERF reconstruction datasets bustling urban areas. Both Alex and Jonny took some time in Japan. Osaka was hosting its world exposition, calling many of the conference go-ers away to see the spectacles.



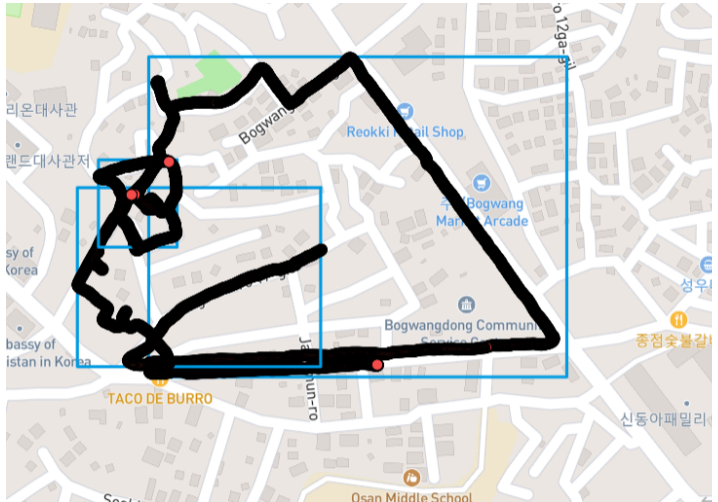
A full listing of datasets and their contributors are provided in appendix 1.

Please contact Scott McAvoy (smcavoy@ucsd.edu) for any questions regarding access to this data.

Special thanks to Tamara and Kevin Kinsella, and to looq.ai for their support.

Bogwangdong - August 28-29

Bogwang-dong, a historic neighborhood in Seoul's Yongsan District, faces imminent demolition as part of a two-year urban redevelopment plan. Established in the mid-20th century, the area is known for its labyrinthine alleys, modest hanok-inspired homes, and a tight-knit community that has preserved a slice of old Seoul amid the city's rapid modernization. Despite its cultural resonance and architectural remnants of post-Korean War resilience, the district has



been earmarked for high-rise residential and commercial complexes, sparking protests from residents and heritage advocates who argue that its erasure would dismantle a living archive of Seoul's working-class history. The plan reflects ongoing tensions between urban progress and the preservation of intangible

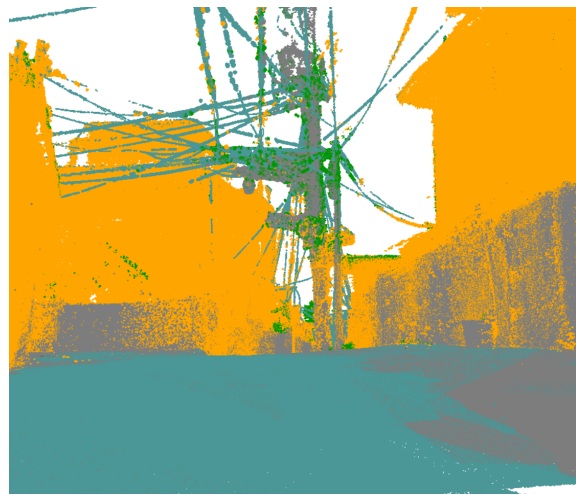
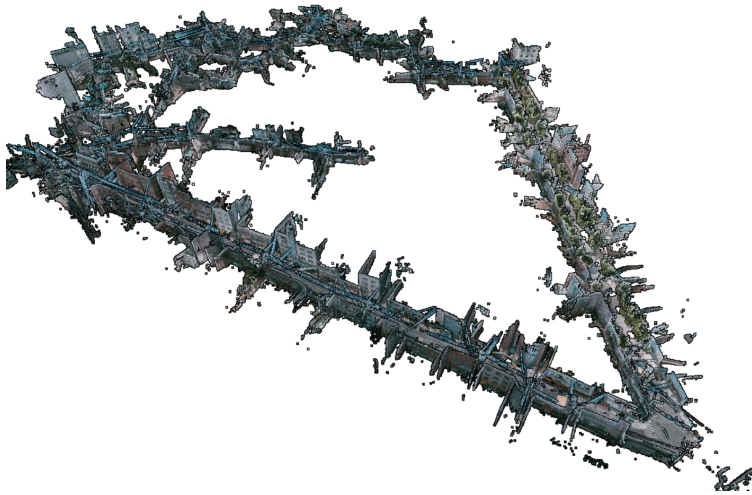


community identity in South Korea's capital.

This area is much shabbier than other parts of the modern clean city. Bogwangdong is known for its portrayal in the movie *Parasite*, where a destitute family lives in a musty basement apartment.

High walls made it difficult to capture meaningful data of the interior block using the handheld Looq. Alex used the Insta360 on an extension pole to better collect data above the walls.

A total distance of 1.5 km was covered, over the course of three scans. The heat and verticality of the environment made progress surprisingly difficult. Special attention was given to a traditional temple at the top of the hill.

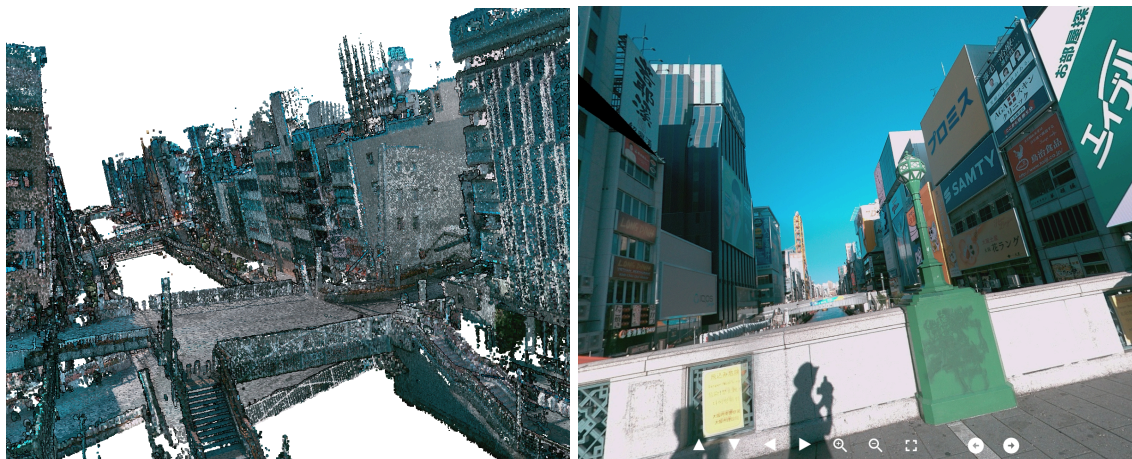


The reconstruction was successful, with some elevation issues in the final scan, resulting in perfect horizontal alignment but a 1.7 meter vertical offset. This ended up being a great dataset for powerline classification! The old neighborhood has some very complicated electrical networks.



Reconstruction quality was much better in the densely packed side streets, packed with shops and vendors. The Looq's ai masking system removed the thousands of people, who were walking these narrow streets.

There were some major tilt issues on the 2nd and third scan, not unlike those we observe regularly in Yucatan.



Data Acquisition:

Our imaging tools and methodologies are outlined below:

Insta360 x3 panoramic camera



Approx. 72 MP (11904 x 5952) in timelapse mode, used to capture a series of spherical panoramics intended for NERF reconstruction tests

Mobile Mapping System - Looq



The Looq is a multi-camera GPS assisted photogrammetric 3d mapping system with 4x 5mp cameras. The speed of acquisition, pre-aligned views, and built in lighting systems make the Looq ideal for tight spaces, caves, tunnels, alleyways...

Intended for infrastructure inspection, and positioning of spherical images, resolution and accuracy of 3d products are generally expected to be within 3 cm.

Data Quality and Availability

The data provided by this project is not certified by a licensed surveyor. Measurements provided are subject to error. If an application requires a particularly high level of accuracy or precision (for example, a hydrological analysis) please contact the authors of this report.

All data is published on [OpenHeritage3D.org](https://openheritage3d.org), citable as:

Jonathan Klingspon, Alexander Mai, Scott McAvoy, Falko Kuester, Cultural Heritage Engineering Initiative (CHEI) 2025: Bogwang-Dong, Seoul - Photogrammetry - Terrestrial. Distributed by Open Heritage 3D. <https://doi.org/10.34946/D6B018>

Jonathan Klingspon, Falko Kuester, Cultural Heritage Engineering Initiative (CHEI) 2025: Dotonbori District, Osaka - LiDAR - Terrestrial. Distributed by Open Heritage 3D. <https://doi.org/10.34946/D6688F>

Appendix - Data Inventory

Description	Data Lead	Source	Internal Path
Bogwangdong Looq 3 Scans	Jonathan Klingspon	Looq q1	south_korea\bogwangdong_2025\master\loooq
Osaka Looq 3 Scans	Jonathan Klingspon	Looq q1	japan\osaka_2025\master\loooq
Bogwangdong Insta360	Alexander Mai	Insta360 x3	south_korea\bogwangdong_2025\master\sfm-insta360