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Data Driven Prediction of Seismic Ground Response under Low Level Excitation

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It is an important task to model and predict seismic ground response; the results of ground response analysis are, in turn, used to assess liquefaction and integrity of underground and upper structures. There has been numerous research and development on modelling of seismic ground response, but often there are quite large difference between prediction and measurement. In this study, it is attempted to train the input and output ground excitation data and make prediction based on it. To initiate this work, the deep learning network was trained for low level excitation data; the results showed reasonable match with actual measurements.

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