

Spline Interpolation on IoT-based Seismographs

Fahreza Rizkia Azhar¹, Hilal Hudan Nuha²

^{1,2,3}Fakultas Informatika, Universitas Telkom, Bandung

⁴Divisi Digital Service PT Telekomunikasi Indonesia

¹fahrezar@students.telkomuniversity.ac.id, ²hilalnuha@telkomuniversity.ac.id,

Abstract

This research assesses cubic spline and quadratic interpolation methods in analyzing seismic data from IoT-based seismographs. Both techniques effectively model seismic patterns with minor deviations. Cubic spline interpolation demonstrates proficiency in handling incomplete data, while quadratic interpolation slightly improves pattern adherence. Moreover, cubic spline interpolation shows more efficient execution times than quadratic. These findings contribute to advancing IoT-based seismographs, emphasizing spline interpolation's role in enhancing seismic data accuracy and understanding earthquakes. The study underscores cubic spline interpolation's potential in seismology and IoT's importance in earthquake monitoring.

Keywords: Earthquakes, IoT Seismographs, Cubic Spline Interpolation

