Predicting Earthquake Building Damage in Nepal

Benjamin Bowman
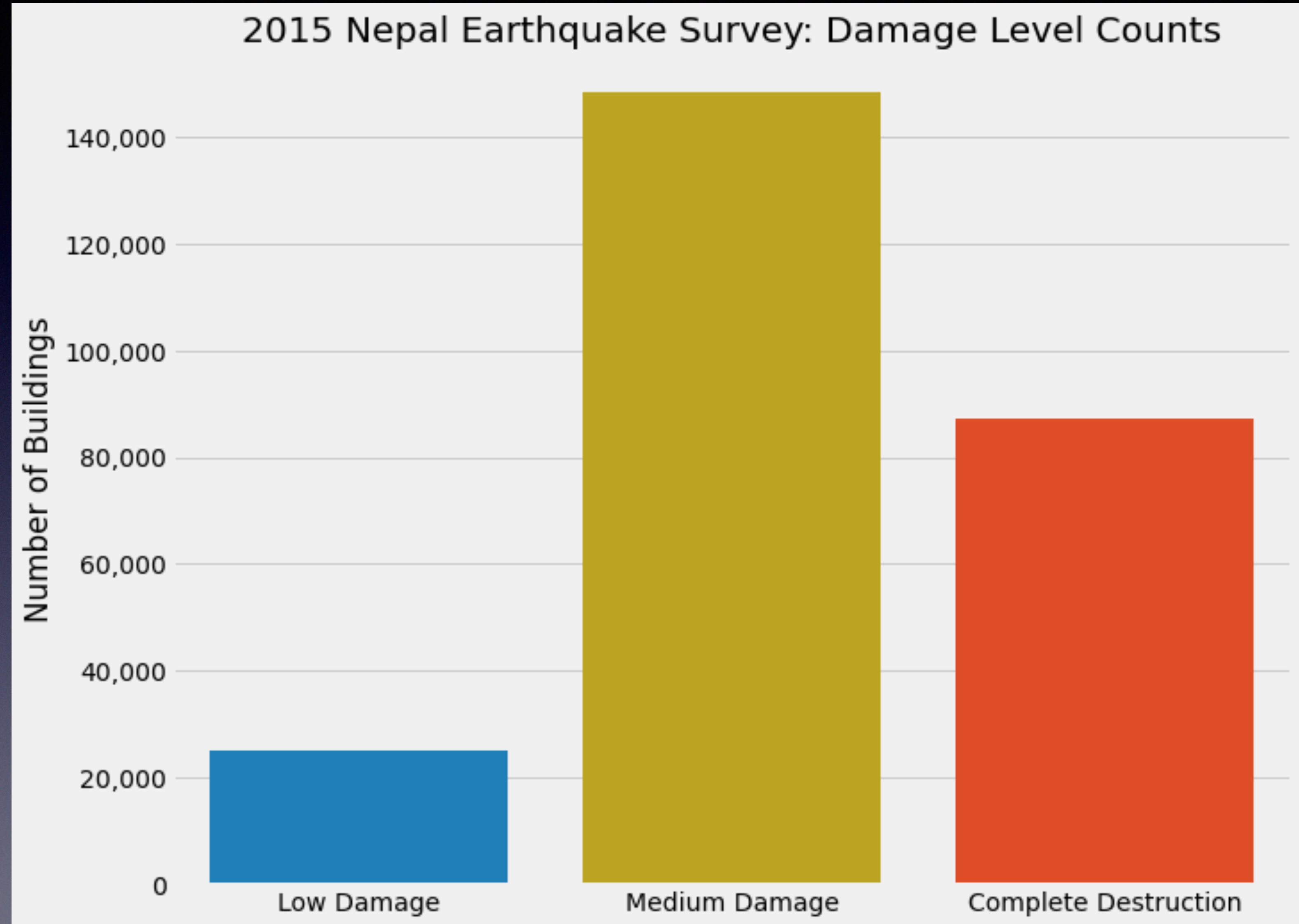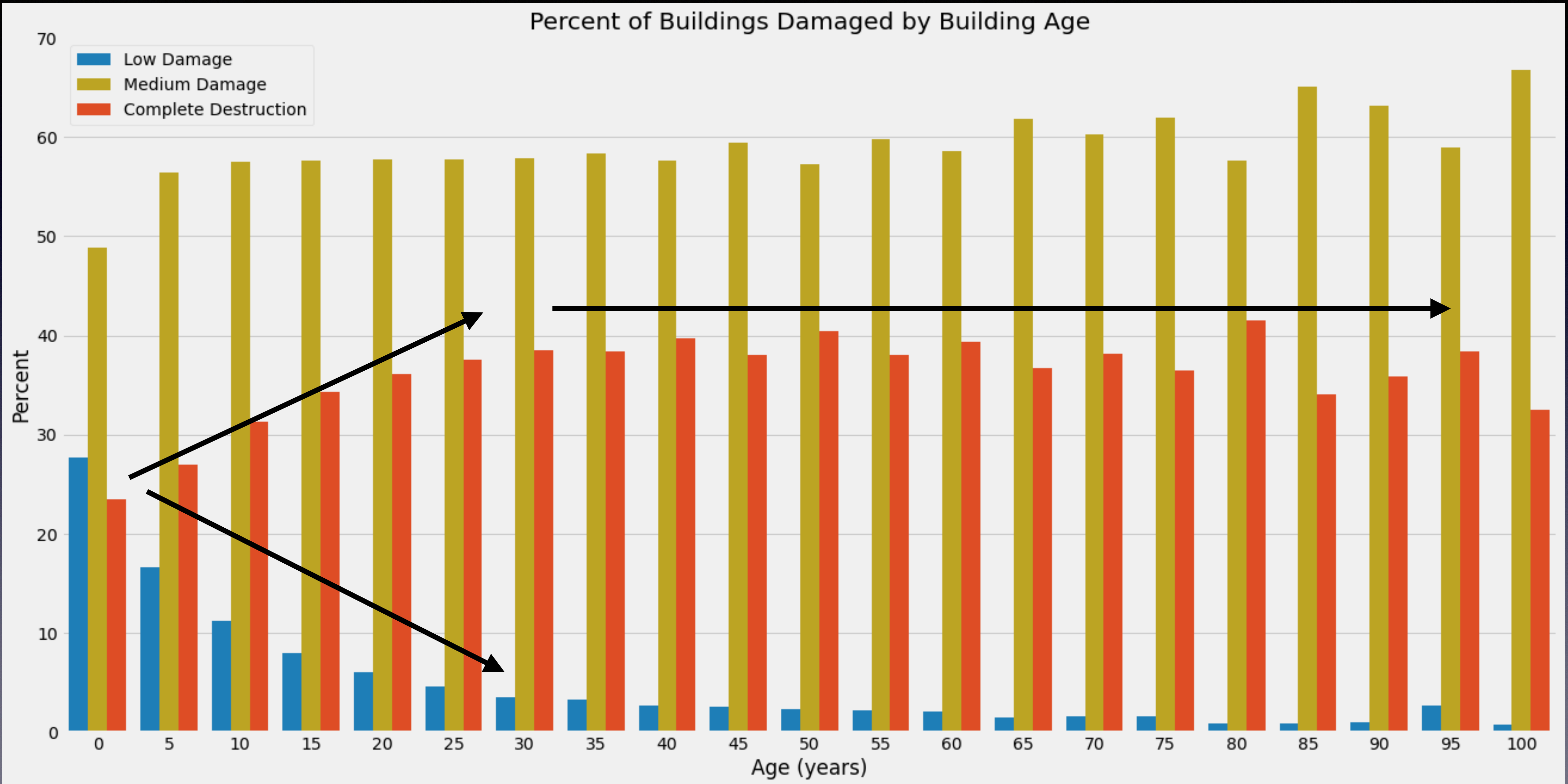
Problem Description

DATA

- Data from: DrivenData.org (sourced from 2015 Nepal Earthquake Open Data Portal)

- Over 260,000 building records

- Each describes 38 building characteristics
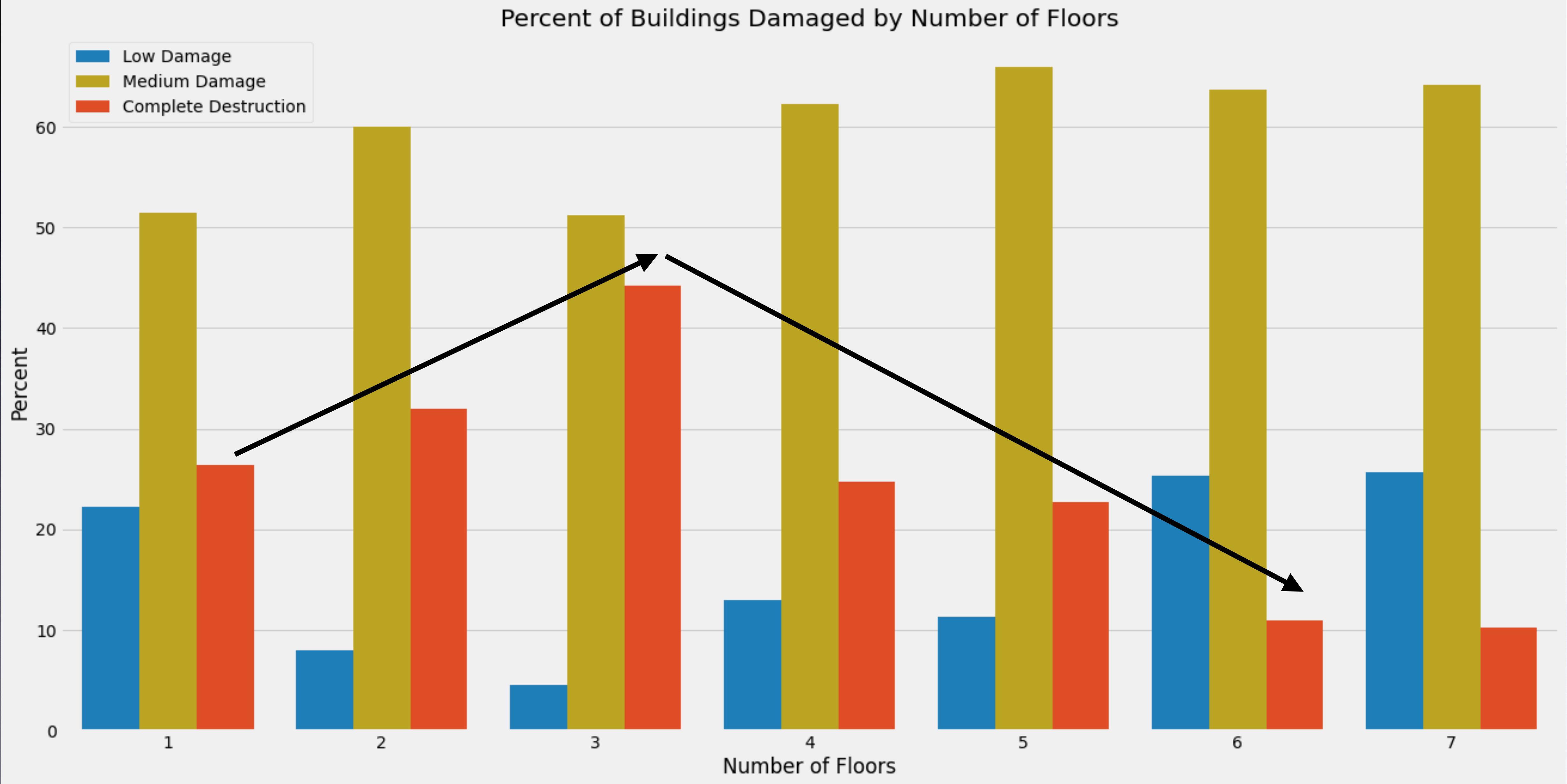
Damage Levels

- Low Damage: 9.7%

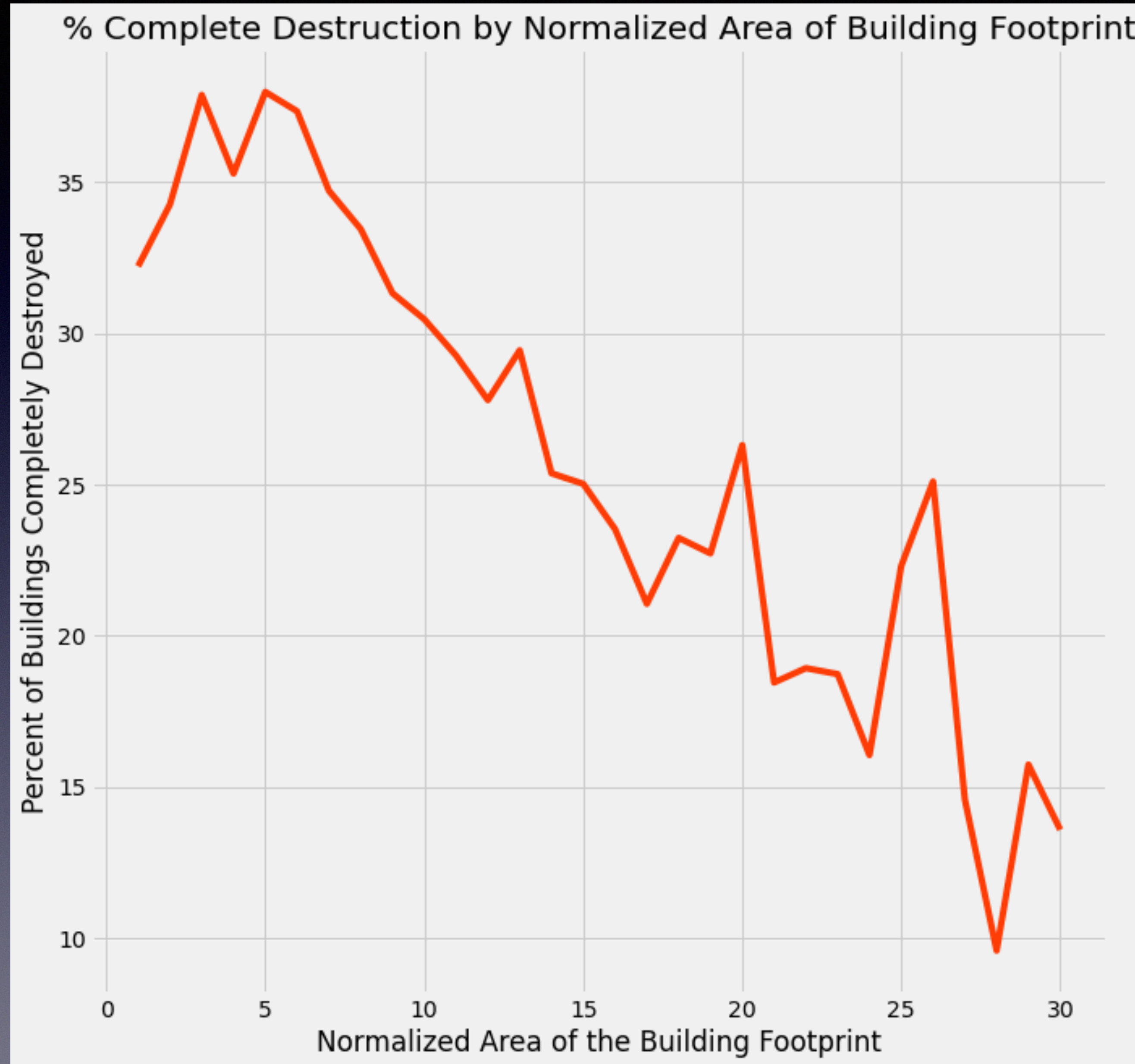- Medium Damage: 56.9%

- Complete Destruction: 33.5%

2015 Nepal Earthquake Survey: Damage Level Counts

Age of the Building

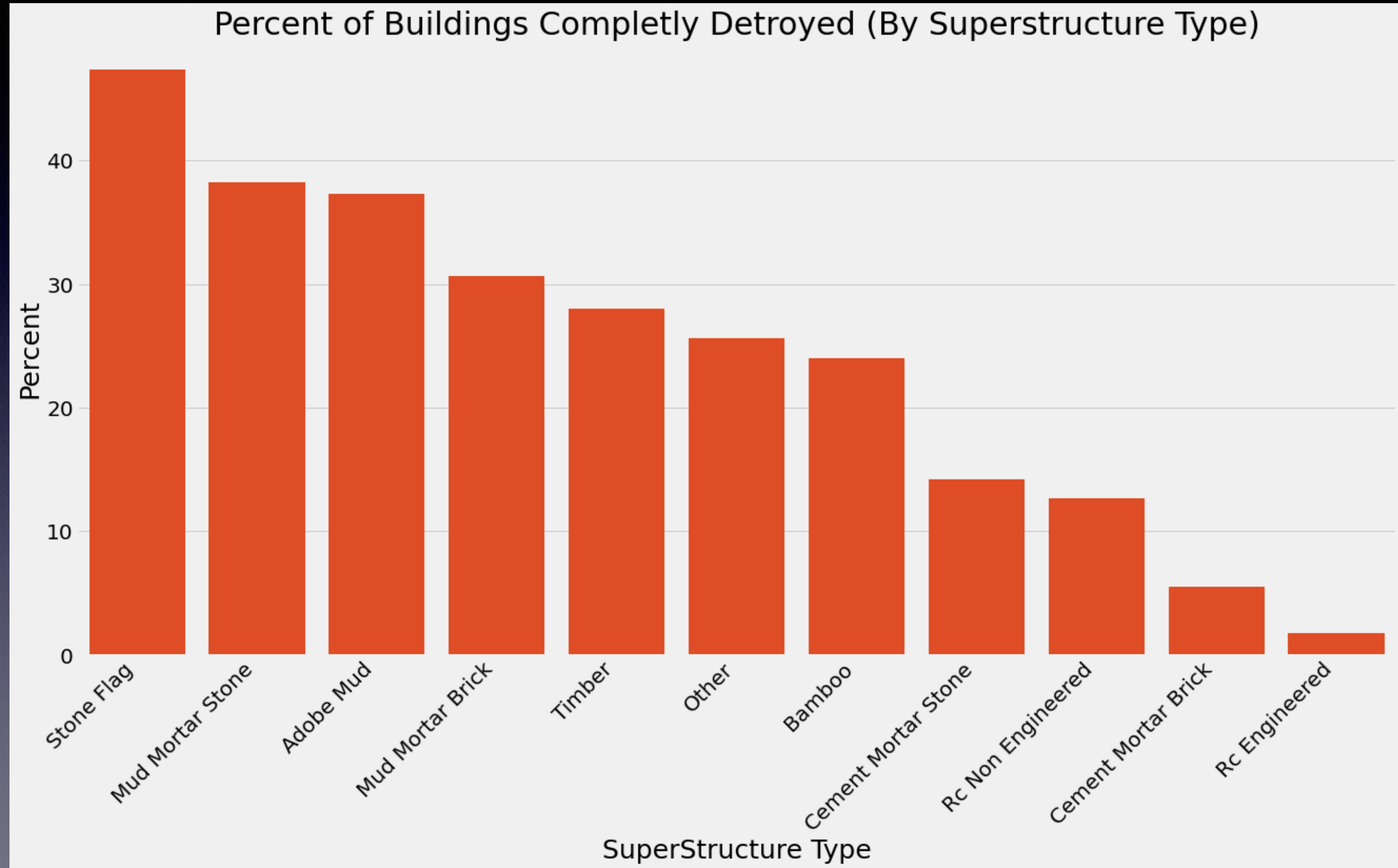Percent of Buildings Damaged by Building Age
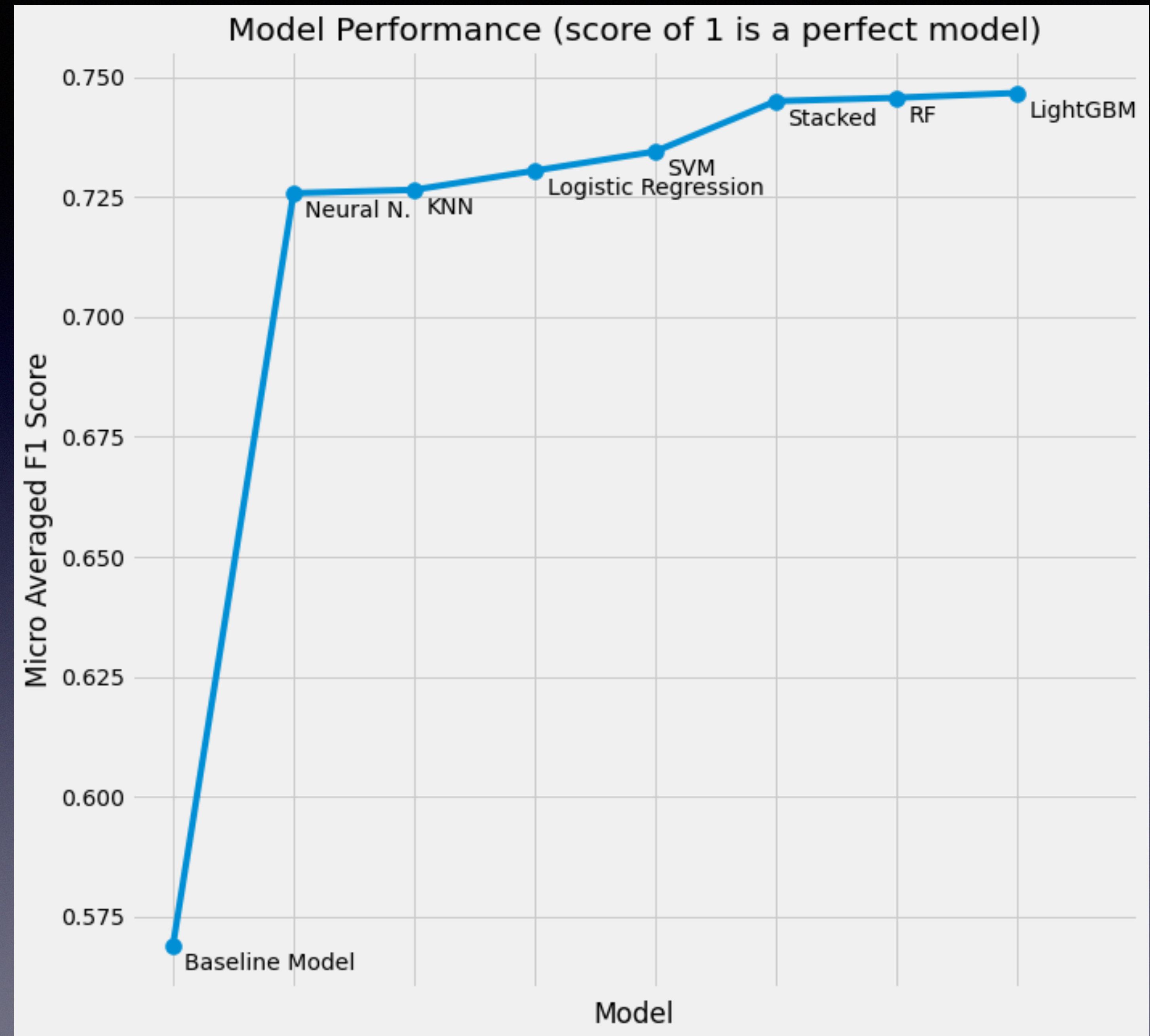
Number of Floors

Building Footprint

Superstructure

Model Performance

Best Model Correctly Identifies:

- 56% of Low Damaged Buildings

- 84% of Medium Damaged Buildings

- 65% of Completely Destroyed Buildings

Model Performance (score of 1 is a perfect model)

Additional Work

- Further feature engineering and tuning

- Model performance close to a ceiling

Questions & Contact

Benjamin Bowman

- GitHub: github.com/fivearm

- LinkedIn: linkedin.com/in/benb24