Machine Learning for Construction Safety

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This project introduces students to the exciting world of computer vision and machine learning through a real-world civil engineering problem: identifying safety equipment (like hard hats and vests) on construction sites.

Students will:
- Explore the importance of safety monitoring in construction.
- Learn the fundamentals of object detection and AI-based image labeling.
- Build their own dataset by labeling real images from construction sites.
- Train and test a machine learning model to detect people and safety gear in images.

A basic programming background (e.g., Python, C++, or MATLAB) is required, but no prior knowledge of machine learning or computer vision is assumed.

* Image data from Kaggle

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