

Applying Computer Vision to Track Library Occupancy

(Technical Report)

Resisting the Surveillance State:

How Americans Are Fighting to Stop Mass Data Collection

(STS Research Paper)

An Undergraduate Thesis Portfolio

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Bachelor of Science in Computer Science

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Preface

What is the optimum balance between surveillance and privacy?

During peak study hours, finding a quiet study space in a university library can be difficult and time-consuming. With an app that shows the occupancy of each library on a college campus, students could efficiently target their searches. To support the proposed mobile app, a computer vision model running on live camera feeds from each library floor would enumerate people in each study space. Users could consult the app to find areas with vacant study spaces. A design specification for such an app was developed and presented in a technical report.

In the United States, government agencies and private companies collect vast personal data. Since the coronavirus pandemic, rising internet use and public awareness of data privacy have stimulated greater resistance. Data privacy advocates resist indiscriminate data collection through whistleblowing and litigation, and by developing accessible consumer privacy tools.