

## 2. Second Proposal - On Campus

### Spatial and Analytical Study of Student Housing at Carnegie Mellon

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#### A. Topic

Carnegie Mellon is an urban university with many students living off-campus. Finding housing off-campus is generally left up to individual students, who take into account many variables when choosing a house or apartment. Many students list their off-campus addresses in the C-Book directory published by APhiO. We propose geocoding this information using GIS and then performing spatial and analytical analysis to create a picture of the dynamics of student housing both on and off-campus at CMU. Each geocoded address would have other attributes from the C-Book linked to it such as: department, year, and a variable describing whether a student is an undergraduate or graduate student. The resulting spatial database will be a valuable tool that would be useful to the university for the planning of shuttle routes, campus police coverage, and future housing projects. Students would also be able to use this database to find neighborhoods in the city that are popular with other students.

#### B. Questions of the study

Because there is already so much information available in spatial formats that we could intersect with our housing database, we could answer many questions about the dynamics of student housing at CMU. Some questions that we could study include:

- What is the distribution of CMU students by neighborhood?
- What off-campus areas are most popular with undergraduates? With graduate students?
- Do students in certain majors cluster together?
- What percent of off-campus students live within X miles of a shuttle or bus stop.
- What is the average commute distance for undergraduates? For graduate students?

#### C. Research

1. Title: The Causal Effect of Campus Residency on College Student Retention  
Author name(s): Lauren T. Schudde  
Date: Summer 2011  
Source: *The Review of Higher Education*, Volume 34, No. 4, pp. 581-610  
[http://muse.jhu.edu/journals/review\\_of\\_higher\\_education/v034/34.4.schudde.html](http://muse.jhu.edu/journals/review_of_higher_education/v034/34.4.schudde.html)  
Summary: Assessing demographics and certain characteristics among those college students who live on and off campus, particularly how campus residency affects retention of students. Our survey could draw on some of the insight for possible survey measures and execution in looking at campus residency and characteristics among CMU's student population.  
Team member: Terra Mack
2. Title: Campus Housing Construction and Renovation  
Author name(s): James C. Grimm, Norbert W. Dunkel  
Date: June 1999  
Source: Full-length book published by *The Association of College and University Housing*  
Summary: This book investigates the relationship between college students and their physical environments by specifically looking at 42 projects in 36 different universities. Housing characteristics studied in the book could be incorporated into the

questions asked in our survey.

Team member: Shannon Lauricella

3. Title: Housing: A Financial Look  
Author name(s): Michael R. Fitzgerald  
Date: September 25, 2006  
Source: CMU's *The Tartan* [http://thetartan.org/2006/9/25/news/housing\\_realestate](http://thetartan.org/2006/9/25/news/housing_realestate)  
Summary: This article, published in Carnegie Mellon's own newspaper, specifically highlights some of the points we want to survey students on-campus. It talks about the price differential in living on-campus versus off-campus as well as the nature of housing prices in close proximity to Carnegie Mellon. Most importantly, this article shows that CMU students have an interest in their housing options, making our suggested survey more relevant.  
Team member: Alejandra Munoz Munoz
4. Title: A Quasi-Experimental Approach to Estimating the Impact of Collegiate Housing  
Author name(s): Ryan Yeung  
Date: 2010  
Source: <http://student.maxwell.syr.edu/ryyeung/college.doc>  
Summary: Yeung attempts to identify the relationship between on/off-campus housing with GPA and social and academic integration. This is relevant to studying how areas of academic study play into college housing and proximity to campus.  
Team member: Ariel Liu
5. Title: The Disengaged Commuter Student: Fact or Fiction?  
Author name(s): George D. Kuh, Robert M. Gonyea, Megan Palmer  
Date: 2001  
Source: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.182.9974&rep=rep1&type=pdf>  
Summary: This paper present the findings of a survey that wanted to answer if students that live off-campus are less engaged with studies compared to students that live on campus. Engagement is defined as an important part of the academic experience and it is believed that off-campus housing interferes with this process.  
Team member: Sam Lavery