Faculty Sponsor: Marcus Roper
Research Mentor: Mike Lindstrom (instructor)
Office: MS 5622
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Weekly Group Meetings and Lectures: Mon 6-7 pm (MS 6229), Wed 6-7 pm (MS 6229), Thurs 9-10 am (MS 5117)

Course Description: Studying homeless movements in Los Angeles through data science, machine learning, and modelling

Expectations:
- Researching and coding simulations: 4-6 h/week
- Report Writing: 0-2 h/week
- Weekly Meetings/lectures: 2-3 h/week

Grading Scheme:
- Attendance and Research: 45% (attending meetings, task work and completion)
- Oral Exam: 20% (individual questions about the math and work)
- Final Presentation: 10% (presenting the work as a group to public audience)
- Midterm Report: 5% (written report of overall findings mid-quarter)
- Final Report: 20% (written paper of overall findings of the work)

Week | Research Activity
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1 | Research meetings and/or lectures
2 | Research meetings and/or lectures
3 | Research meetings and/or lectures
4 | Research meetings and/or lectures
5 | Research meetings and/or lectures
   | F: May 4th – Midterm report due by 5 pm
6 | Research meetings and/or lectures
7 | Research meetings and/or lectures
8 | Research meetings and/or lectures
9 | Research meetings and/or lectures
10 | W: June 6th Final research meeting & practice presentation
   | R or F: Final presentation

Exam Week | M-F: Oral exams
R: June 21st – Final report due by 5 pm

* Lecture topics could include: logistic regression, topic modelling, artificial neural networks, convolutional neural networks, clustering algorithms, numerical approximations to partial differential equations, etc. Not every week will have a lecture; some of these topics may be covered and others not listed may be relevant.