

1 Progress

- Collected papers regarding Hilbert space filling curves. The algorithms are space filling curves, not Hilbert space filling curves because they are not recursive. This needs a decision about pursuing this further. Peano curves are related
- Code provided to Kanika to select N samples from $\prod_{i=0}^x V_i * D_i$ using a simple space filling curve. This produced a smooth even sample curve between each of the dimensions, it also suffered from over sampling from a single variable V_i and from that single variables domain D_i when the step size is one of the dimensional sizes.
- Reorganized Thesis documents into master documents and sub documents so future organization is easier. Appendix enhanced with updated references and bib tex entries. There are some X entries in the references section now.
- Reading either a paper (related) or several articles (unrelated) each night for background material. Working on skimming and marking up with highlighter as quick practice.

2 Other Work

- Produced a report of the project description for Dr. Catherine Page. Also provided background material and asked her to sit on the dissertation board should I be accepted into the PhD. program.
- <http://chemistry.uoregon.edu/profile/cpage/>
- Potentially investigating how this project would benefit from AI/ML in the long run. If so then taking the project in that direction so Dr. Daniel Loud
- Hopefully won a bid for work from my old employer. Contract work that should take about a day hopefully.

3 Questions

- I feel like I've stalled with Thesis as I don't know what to write about or research next. I still think a survey paper of the internal representation techniques currently used is the right way to go. Will this demonstrate the ability to research the background of a subject thoroughly?
- Programmatic generation of a hypergraph is not standard and should not be the qualifying criteria for a hypergraph/graph package in the rest of the world, leaving this custom development to explore it. Would a qualitative report capture the essence that these software packages are not capable of dealing with the representation?
- On the current trajectory will be I be in place to get into a PhD. program at the University of Oregon?

4 Decision

- If i am in place to get into a PhD. program the deadline for application is Dec 10th, I need to possibly take the GRE again which will consume the current time spent on Thesis work to study for the GRE and take the test.
- If I do not need to re-take the GRE then I can spend more time working on Thesis.