**Final Phase PHD**

**Current Phase: Implementing and Experiments of Preferences**

Week 1 - Review on preference learning literature techniques.

Week 2-3 - Formulating experimental design and preference model.

Week 4-5 - Developing preference algorithms.

Week 6-8 Testing and refining preference models.

Week 9-10 - Conducting large-scale experiments.

Week 11-12 - Analyzing findings and making refinements.

Week 13 - Summarizing phase, conclusion and planning

**Phase 3: Implementing and Experiments of Goals**

Week 1-2 – Examining the literature on goal predictions.

Week 3-4 - experimental design for goal inference.

Week 5-7 - Creating algorithms for goal representation.

Week 9-12 - Testing goal-oriented models.

Week 13-15 - Conducting comprehensive experiments.

Week 16-20 - Analyzing results and iterating on models.

Week 21-25 - Final experiments and data synthesis.

Week 26-31 – Concluding the goal infrastructure and preparing for integration.

**Phase 4: Integrating Inferring Goals and Preferences**

Week 1-2 - Defining how to synergize goals and preferences.

Week 3-4 - Developing integrative machine learning architecture.

Week 5-8 - Conducting pilot integration experiments.

Week 9-12 - Optimizing integrated system.

Week 14-17 - Final testing and result compilation.

Week 18 – Finalizing the infrastructure and transitioning to thesis writing.

**Phase 5: Thesis Writing**

Week 1-3 - Drafting thesis outline and introduction.

Week 4-6 - Finalizing literature review

Week 8-13 - Writing methodology and experimental sections.

Week 14-20 - Detailing results, analysis, and discussion.

Week 21-24 - Writing conclusion and abstract.

Week 25-28 - Compiling first draft for feedback.

Week 29-32 - Revising and refinement.

Week 33-34 - Preparing for final submission.

Week 35 - Final review and submission.

**1 Week Research Notes.**

**Questions: Does bag of colors capture all features, how about sequence?**

**Can we generate and run more features and test how the method scales?**

**Lastly, have 1 state of the art run on the same dataset and see how it compares with pipeline**

**Do we have failed experiment results, comparison tables of why the current pipeline works?**

**Clustering is great but how do we get the preferences and is it the best way?t**

* **Implemented bag of colors which is limited due to loss of sequence needed in real life, so I researched on : 1. n-grams – works but limited when n increases. 2. Positional info- feature engineering, works but how does that compute in real life? 3. Sequence Padding/Truncation + Embeddings + Neural Networks. - Can model complex and long-range dependencies within the sequence. Embeddings can capture richer representations of the "colors"**