







## **Capstone** — **Task list report**

## **Active Tasks**

| Task   | Start Date | Due Date   | Responsible         | Created<br>By          | Priority | Progress | Status                                      |
|--|------------|------------|---------------------|------------------------|----------|----------|---|
| Executive Summary - First Draft Completed  | 09/20/2022 | 09/20/2022 | Beth Vander<br>Hoek | Shannon<br>Bayless     | Medium   | 0%       | Due to<br>(Not<br>started                   |
| Finish PMP In progress   | 09/20/2022 | 09/20/2022 | Beth Vander<br>Hoek | Shannon<br>Bayless     | High     | 0%       | Due to<br>(Not<br>starte                    |
| Finalize Datasets In progress  | 09/20/2022 | 09/20/2022 | Anyone              | Shannon<br>Bayless     | High     | 0%       | Due to<br>(Not<br>starte                    |
| EDA In progress  | 09/20/2022 | 09/20/2022 | Anyone              | Shannon<br>Bayless     | High     | 0%       | Due to<br>(Not<br>starte                    |
| Written Executive Summary (1 paragraph) Completed  | 09/20/2022 | 09/20/2022 | Beth Vander<br>Hoek | Beth<br>Vander<br>Hoek | Medium   | 0%       | Due to<br>(Not<br>starte                    |
| Exploratory Questions pdf (5-10 finalized questions)   |            | 09/20/2022 | Beth Vander<br>Hoek | Beth<br>Vander<br>Hoek | Medium   | 60%      | Due to                                      |
| Create two group Containers & SQL Database In progress  Container for producer to pull from, container for consumer to send to, database for eventual data platform  |            | 09/20/2022 | Shannon<br>Bayless  | Beth<br>Vander<br>Hoek | Medium   | 50%      | Due to<br>(Start                            |
| Build Producer and Topic In progress  Build producer and create topic with unique name elevant to dataset producer is sending (i.e. Drug-Dverdose, Crime-Rate, etc.). TELL US WHAT TOPIC NAME IS. Producer will send RAW csv data over to consumer under the designated topic name (no eleaning/editing data beforehand) | 09/21/2022 | 09/21/2022 | Shannon<br>Bayless  | Shannon<br>Bayless     | Medium   | 0%       | Upcor<br>(within<br>days)<br>(Not<br>starte |
| Jpload all data sets to azure container In progress  | 09/21/2022 | 09/21/2022 | Dev10               | Shannon<br>Bayless     | High     | 0%       | Upcor<br>(within<br>days)<br>(Not<br>starte |
|  | 09/21/2022 | 09/21/2022 | Anyone              | Shannon                | Medium   | 0%       | Upcoi                                       |

| Create ERD To do  |            |                     | Bayless                |        |    | (within 7 days) (Not started)                      |
|---|------------|---------------------|------------------------|--------|----|--|
| Napkin drawings data pipeline diagram To do  How cloud/data factory flow will look like   | 09/21/2022 | Anyone              | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Research Best Machine Learning Model for Data  To do  Research which ML model to use for data   | 09/21/2022 | Beth Vander<br>Hoek | Beth<br>Vander<br>Hoek |        | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Create tables in Database based on ERD schema To do   | 09/22/2022 | Anyone              | Beth<br>Vander<br>Hoek |        | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Build Consumer & Append to SQL database table To do  Create consumer using same topic name as producer. Receives data messages then sends data to other group container (from one group container to the other). Data needs to eventually end up in SQL | 09/23/2022 | Anyone              | Beth<br>Vander<br>Hoek |        | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Final data pipeline diagram  Maybe use icons to look pretty like GitHub repo project diabetes example?  | 09/26/2022 | Anyone              | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Napkin drawings dashboard + post for feedback  What we want dashboard to look like (ROUGH sketch; nothing too detailedwe lose points for that)  Post to teams afterwards to get 2 feedback comments (will use to make final draft)                      | 09/26/2022 | Anyone              | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Data Clean & Transform 2-3 Datasets  Every group member should choose 2-3 datasets to clean IN A DATABRICK. Use comments to make clear what you're doing at each step. Take notes on steps so that ETL report is easy to make                           | 09/26/2022 | Dev10               | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Create Data Factory & Run Producer/Consumer Automated Use exercise data factory as baseline.  | 09/26/2022 | Anyone              | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(within 7<br>days)<br>(Not<br>started) |
| Add rest of cleaned data to SQL database (if not through producer/consumer data factory)  | 09/26/2022 | Anyone              | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming (within 7 days)                           |

| Make sure no repeats of data; only if not already added. Keep track of steps to add for ETL (merging, etc.)  |            |        |                        |        |    | (Not<br>started)             |
|--|------------|--------|------------------------|--------|----|------------------------------|
| ETL Report Introduction & Sources (APA Format)   | 09/27/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| ETL Report: Extract, Transform, Load for 2-3 Datasets YOU Cleaned  For datasets you cleaned earlier (every person has 2- 3). Be sure to number steps and be clear as possible  | 09/27/2022 | Dev10  | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Finalized napkin drawing for dashboard  Use feedback from Teams chat to make changes as needed to Dashboard napkin drawing. Keep it ROUGH (we lost points if too detailed). Make note if you decided not to use feedback and why | 09/28/2022 | Anyone | Beth<br>Vander<br>Hoek |        | 0% | Upcoming<br>(Not<br>started) |
| Build, Export, & Load ML Model  See exercise/demo in applied kafka folder for help   | 09/28/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Edit ETL Report & Write Conclusion (make it perfect :)   | 09/28/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create napkin drawings for visualizations (1/2maybe federal level questions)  Post in teams for feedback afterwards; need 2 pieces of feedback. KEEP ROUGH (detailed = lose points)  | 09/29/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create napkin drawings for visualizations (1/2state-level questions)  Post in teams for 2 comments of feedback; coordinate with other visualizations to post at the same time/combine document                                   | 09/29/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Refine/hyper-parameter tune MI Model  Make sure model is at optimal performance: feature engineering, tune hyperparameters, etc.   | 09/30/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Using feedback, create final napkin drawings for ALL visualizations  Use feedback from 2 comments on Teams; make notes as to why not using feedback if so  | 10/01/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create ReadMe  ReadMe includes datasets used, links to files in repo, diagram of cloud/data factory, group member names, exploratory questions, how to navigate repo, etc. (see diabetes capstone githib for inspo)              | 10/03/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create Visualizations for State Level Questions using Dash Format  Visualizations for state questions (not including ML model, prediction, accuracy). Do in Dash format  | 10/03/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create visualizations for national level questions using Dash format   | 10/03/2022 | Anyone | Beth                   | Medium | 0% | Upcoming                     |

| ONLY for national questions, not Model, state questions  |            |        | Vander<br>Hoek         |        |    | (Not<br>started)             |
|--|------------|--------|------------------------|--------|----|------------------------------|
| Create visualizations for MI model: predictions, accuracy, etc. (dash format if possible)  | 10/03/2022 | Anyone | Beth<br>Vander<br>Hoek | Medium | 0% | Upcoming<br>(Not<br>started) |
| Create Dash Dashboard (copy & paste visualizations codes together), add layout features & auto-update  | 10/04/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Presentation Slideshow Intro, Initial Questions, Research Process/EDA slides First half of presentation slideshow  | 10/04/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Presentation Slides Machine Learning Use/Tuning/Results/Accuracy, Gov. Policy Recommendations, Concluding Slide (Sources)  Second half of slideshow presentation   | 10/04/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Make sure all code is uploaded to repo (and that code is readable): dash visualizations, databricks, etc.  | 10/04/2022 | Dev10  | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming (Not started)       |
| Presentation Dry Run: Make sure we are in 10 mins range; assign slides to speakers   | 10/05/2022 | Dev10  | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Technical Report Executive Summary (copy & paste over), Introduction, Works Cited Page at end (dataset sources; copy & paste from ETL report)  DONE by Wednesday lunchtime                               | 10/05/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming (Not started)       |
| Technical Report Research on Federal Questions (Section I)  First Section of technical report; include visualizations (screen shot from dashboard) for answering federal level questions (two questions) | 10/05/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Technical Report Research Section II: Explain Machine Learning model, predictions, accuracy, include visualizations; answers questions 3/4 (predict poverty level using factors)                         | 10/05/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Technical Report Research Section III: Answer questions about state (excluding machine learning); include visualizations   | 10/05/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming (Not started)       |
| Technical Report: Conclusion, Edit/Review other sections & introduction  | 10/05/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Class Presentation  Presentation for the class!  | 10/06/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| All project components COMPLETE & PERFECTED  EOD THURSDAY!!! Project is perfect :)   | 10/06/2022 | Anyone | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming (Not started)       |
| All PDFs, code uploaded to GitHub: presentation slides, final report, dashboard/visualizations code, ERD, napkin drawings & feedback (Dashboard &  | 10/06/2022 | Anyone | Beth<br>Vander         | High   | 0% | Upcoming<br>(Not             |

| visualizations), ETL report, ReadMe, Azure Studio Links, data pipeline diagram, exploratory questions |            |                     | Hoek                   |        |    | started)                     |
|---|------------|---------------------|------------------------|--------|----|------------------------------|
| THURSDAY MORNING/WEDNESDAY NIGHT ALL DONE!!   |            |                     |                        |        |    |                              |
| Update Repo/ReadMe as needed; make sure everything is uploaded properly                               | 10/06/2022 | Beth Vander<br>Hoek | Beth<br>Vander         | Medium | 0% | Upcoming                     |
| Thursday morning before presentation start  |            | поек                | Hoek                   |        |    | (Not<br>started)             |
| Final Presentation Completed  | 10/07/2022 | Anyone              | Beth<br>Vander<br>Hoek | High   | 0% | Upcoming<br>(Not<br>started) |
| Final presentation to class, attendees, Dev10,<br>Genesis10, shareholders, clients                    |            |                     | поек                   |        |    | Starteu)                     |

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