# SE 492 WEEKLY REPORT 1 - Team Addition and Updates

sdmay20-25: Consumer Aware Warehouse Management

1/13/20 – 1/27/20

| Team Member | Roles |
|---|---|
| Jimmy Paul<br>jpaul@craftydelivers.com | Client |
| Goce Trajcevski<br>gocet25@iastate.edu | Advisor |
| Lindsey Sleeth<br>lssleeth@iastate.edu | Meeting Scribe<br>Project Manager<br>Software Developer |
| Sam Stifter<br>stifter@iastate.edu | Test Engineer<br>Software Architect<br>Software Developer |
| Omair Ijaz<br>oijaz@iastate.edu | Quality Assurance Engineer<br>Meeting Facilitator<br>Software Developer |
| Jameel Kelley<br>jamkelley22@gmail.com | Report Manager<br>Software Architect<br>Software Developer |
| Andrew Smith<br>arsmith3@iastate.edu | Database Administrator<br>Quality Assurance Engineer<br>Software Developer |
| Elijah Buscho<br>elijah@iastate.edu | Test Engineer<br>Software Dev<br>Project Manager |
| Devin Üner<br>druner@iastate.edu | Software Architect<br>Machine Learning Specialist |

# Weekly Summary

Objective

Our objective for this week was to set up our regular meeting times as a team, with our advisor, and with our client. Additionally, it was our objective to get the development environments of each team member set up and synchronized with one another, and to plan the first few tasks in order to jump into development in the next week.

Accomplishments

Our meeting times have been set up. Our development environments have been set up. The first few tasks have been assigned. A high level algorithm has also been designed in order to help determine the next steps in terms of development and research.

# Summary of weekly advisor meeting

With our advisor we discussed the adjustment of team roles with a new team member addition. Everyone is clear on what their responsibilities are for the semester. We discussed our first meeting of the semester with our client is and how our project will be extended within this semester.

Our tasks are to clarify special ordering events with our client to understand how we can better represent them in our forecasting algorithm and to research fixed schedule vs. flexible scheduling. Additionally, we should continue to discuss what the interface will be for the final product, whether we show trends per customer or per product.

Our advisor prompted us to think about multivariate vs. univariate time series and a graph of a particular approach vs ground truth on individual vs aggregated data.

# Past Week Accomplishments (Individual)

**Lindsey Sleeth**
I worked on querying the database and understanding relationships between data in various tables. I am working with Andrew currently to pinpoint which data points will be the most useful to input to the algorithm. Additionally, I am coming up with different

options for displaying data to our client. Two methods are consumption levels on a per-product basis or a per-client basis. Finally, I helped onboard our new team member.

**Elijah Buscho**

I developed a high-level [forecasting algorithm](#) that models our problem as a timeline of events that demand for a single product.

**Jameel Kelley**
During this first bit back I updated the notes for the meetings, updated the website with links, and did a small amount of work on updating the schema of products for communication between frontend and backend.

**Andrew Smith**
Working with the data and understanding where things are. It's a very complex database and is very hard to find the things we need.

**Omair Ijaz**
During this first week I helped the frontend team install the necessary software; this includes the local database (postgres),  and Spring Tool Suite. I also looked further into the proposed algorithm and database to get a better idea of how to work with the data we are given.

**Sam Stifter**
I assisted team members with getting the development environment setup. I also performed some maintenance on the server to keep the software we are running up to date and ensure all members still have access as needed. I've also been working on understanding the data schema getting an idea where everything is.

**Devin Üner**
Got added to the team, got caught up on how everything works.

| Name | Individual Contributions | Hours this Week | Hours Cumulative |
|---|---|---|---|
| Lindsey Sleeth | Onboarding team member, identifying data points, modeling of data | 6 | 6 |
| Jameel Kelley | Updating meeting notes and website | 5 | 5 |

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|---|---|---|---|
| Sam Stifter | Assisting former frontend team with setting up the backend development environment | 7 | 7 |
| Andrew Smith | Working with the database | 6 | 6 |
| Omair Ijaz | Helping install software | 6 | 6 |
| Devin Üner | Got added to team | 2 | 2 |
| Elijah Buscho | Develop high-level forecasting algorithm | 15 | 15 |

# Plans for the Upcoming Week

**Lindsey Sleeth**
This week I will be meeting with our client to develop a guide for our team members on the database and the attributes in each table. Since our database is so complex, and not intuitive in its schema, it is important that we have clear communication with our client for correct queries and definitions of table attributes. With our client we will also identify the best data points to input to our algorithm. Additionally, I would like to finish developing endpoints for the main data points so that they may be utilized in frontend and backend development.

**Elijah Buscho**
I plan on researching time series forecasting algorithms, and pick a preliminary models to start implementing. I also plan on researching spring in order to develop a preliminary architecture for implementing the forecasting algorithm.

**Jameel Kelley**
Decide on the languages to be used and define communication protocols between them. Update the frontend to include products of a single distributor. Update frontend display to include pages for multiple displays.

**Andrew Smith**
Continuing to query the database. Big query I would like to get is the products per distributer, and getting and querier we would need in the future.

**Omair Ijaz**

I plan on further refining additional algorithms. I would also like to work on task distribution for this semester as well.

**Sam Stifter**
Work on more endpoints and start the initial version of the prediction algorithm. I will also be helping team members further understand the architecture of the backend software now that they have their development environments set up.

**Devin Üner**
Research machine learning and time series forecasting algorithms.