# Network Intrusion Detection System

# Scrum Meetings Minutes

Some time before

* Met up and agreed on project
* Created github
* Researched machine learning idea
* Researched honey pots

Scrum meetings:

**Date:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** |  |  |  |
| **Patryk Kaiser** |  |  |  |
| **Daniel Mackey** |  |  |  |

**Solutions (if any):**

**Any other points of note:**

**Date:** 17/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Created Kanban board and Kanban cards. | Creating the sprints for the project. | None |
| **Patryk Kaiser** | Started working on the designated sections of the technical proposal, which are the Architecture and the requirements | Worked on the architecture design diagrams and the Use case diagrams for the requirements section of the technical proposal | None |
| **Daniel Mackey** | Continued personal research into the machine learning | Researched and worked on a prototype for the machine learning. This includes testing. | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 18/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Worked on the Gantt Chart and finished off the Kanban board. | Finishing the development methodology section of the technical proposal | None |
| **Patryk Kaiser** | Worked on the architecture design diagrams and the Use case diagrams for the requirements section of the technical proposal | Finishing the requirements section and the architecture section. | None |
| **Daniel Mackey** | Researched and worked on a prototype for the machine learning. This includes testing. | Continuing research on the machine learning and helping Patryk with the technical proposal | None |

**Solutions (if any):**

None

**Any other points of note:**

We have decided to scrap the Honey-pot idea for now and to focus on main intrusion detection system.

**Date:** 24/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Worked on project presentation slides and uploaded them this morning. | Practicing for the Presentation on Wednesday. Updated the Kanban board to date. Started the general data pre-processing task. | None |
| **Patryk Kaiser** | Worked on project presentation slides and added them into the google docs that had the presentations slides. | Practicing for the Presentation on Wednesday. Continued to work on the prototypes. | None |
| **Daniel Mackey** | Worked on project presentation slides and added them into the google docs that had the presentations slides. | Practicing for the Presentation on Wednesday. Continued to work on the prototypes. | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 25/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued practicing for the presentation tomorrow. Continued working on the general Data pre-processing | The general Data pre-processing | None |
| **Patryk Kaiser** | Continued practicing for the presentation tomorrow. Continued working on the prototype code - tenserflow | The machine learning prototype code | None |
| **Daniel Mackey** | Continued practicing for the presentation tomorrow. Continued working on the prototype code - tenserflow | The machine learning prototype code | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 26/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Worked on the Data Pre-processing | Delivered presentation and continues with kanban task – general data pre-processing | None |
| **Patryk Kaiser** | Working on the Prototype code - tenserflow | Delivered presentation and continues with kanban task- prototype | None |
| **Daniel Mackey** | Working on the Prototype code - tenserflow | Delivered presentation and continues with kanban task - prototype | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 27/10/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued with data-pre-processing and started to ask the team which dataset was more important and more relevant to the project (machine learning or general flow) | Continued with the data pre-processing, while waiting on an answer as to which dataset was more relevant. | None |
| **Patryk Kaiser** | Continued the prototype code - tenserflow | continuing the prototype code | None |
| **Daniel Mackey** | Continued the prototype code - tenserflow | Continuing the prototype code | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 7/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | I was waiting on an answer as to which dataset we would use so that I could focus on that. | Still waiting on an answer as to which dataset we would use so that I could focus on that. | None |
| **Patryk Kaiser** | Working on the prototyping | Working on the prototyping and witing for the dataset to continue. | None |
| **Daniel Mackey** | Not here | Not here | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 8/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | I was waiting for an answer as to which dataset to use. I helped Patryk to figure out which dataset would be more useful. | I was given an answer as to which dataset to use (machine learning ). And I started the final stage of the data pre-processing for it. Helped patryk figure out how to deal with the storage and floe issues. | None |
| **Patryk Kaiser** | Ran into some trouble with how to maintain the flow of machine learning and the main interface without the dataset becoming to big and running out of storage. | Worked with Ingrid to try and figure out how to deal with the storage and floe issues. | Trying to think of a way to get around overflowing and breaking the system due to storage flow inconsistencies |
| **Daniel Mackey** | Not in | Not in | Not in |

**Solutions (if any):**

We came to a semi conclusion that if we have a filtering system of sorts in place. Patryk and I (Ingrid) agreed that if we keep the data we collect for a week to allow the system to learn from it and to update itself, then we can clear the data after that week to allow for new data to come in and the process continues like that.

**Any other points of note:**

None.

**Date:** 9/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Cleaning the general Dataset and discussing with the group which dataset was more important and which one was relevant. Started working on the technical review and design document. | Met with our supervisor as we discussed where we were in terms of the project. I got conformation on which dataset to use and focused on cleaning that data. | None |
| **Patryk Kaiser** | Continued with the prototyping and started working on the technical review an design document. | Met with our supervisor as we discussed where we were in terms of the project. Discussed with Daniel how best to proceed and what additional systems would be needed. | None |
| **Daniel Mackey** | Continued with the prototyping and started working on the technical review an design document. | Met with our supervisor as we discussed where we were in terms of the project. Discussed with Patryk how best to proceed and what additional systems would be needed. | None |

**Solutions (if any):**

None

**Any other points of note:**

Met with our supervisor and we agreed to make contact the course of our datasets in Canada for some insight in to how to make it work on a python system. We also agreed that we will need to make a few additional systems to help the main system function. This will also help with the problems from yesterday as we intend to have a cycle where we keep data for a certain amount of time and then clear it to ensure we don’t run out of storage.

**Date:** 10/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Began the final stages of the data pre-processing on the dataset that we intend to use. Continued working on the Technical proposal and design document. | Continued to work on the final stages of the data pre-processing on the dataset that we intend to use. Continued working on the Technical proposal and design document. | None |
| **Patryk Kaiser** | Discussing with Daniel on which new systems to implement to help the main system. Worked on the Technical review an design document. | Continued working on the technical review and design document and continued discussions with Daniel about the additional systems. | None |
| **Daniel Mackey** | Discussing with Patryk on which new systems to implement to help the main system. Worked on the Technical review an design document. | Continued working on the technical review and design document and continued discussions with Patryk about the additional systems. | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 11/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to work on the final stages of the data pre-processing on the dataset that we intend to use. Continued working on the Technical proposal and design document. | Finishing the data pre-processing and finishing the Technical Review and Design Document. | None |
| **Patryk Kaiser** | Continued working on the technical review and design document and continued discussions with Daniel about the additional systems. | Finishing the Technical review and Design document | None |
| **Daniel Mackey** | Continued working on the technical review and design document and continued discussions with Patryk about the additional systems. | Finishing the Technical review and Design document | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 14/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Finished the data pre-processing and finished the Technical Review and Design Document. | Started working on the frontend code for the website using HTML and CSS | None |
| **Patryk Kaiser** | Finished the Technical review and Design document | Started to work on an alternative CIC flowmeter, that will work better with the project. Worked with Daniel to achieve this. | None |
| **Daniel Mackey** | Finished the Technical review and Design document | Started to work on an alternative CIC flowmeter, that will work better with the project. Worked with Patryk to achieve this. | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 15/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Began working on the frontend code for the website using HTML and CSS | Continued making the frontend with HTML and CSS | None |
| **Patryk Kaiser** | Started to work on an alternative CIC flowmeter, that will work better with the project. | Tested the new CIC flow meter program with the machine learning model to see how they work together. Worked on this with Daniel | None |
| **Daniel Mackey** | Started to work on an alternative CIC flowmeter, that will work better with the project. | Tested the new CIC flow meter program with the machine learning model to see how they work together. Worked on this with Patryk | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 16/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued making the frontend with HTML and CSS | Continued making the frontend with HTML and CSS. I started to explore linking the front end to analytics pages such as Power Bi. | None |
| **Patryk Kaiser** | Tested the new CIC flow meter program with the machine learning model to see how they work together. Worked on this with Daniel | Continued to test the new CIC flow meter with the existing machine learning model for compatibility with Daniel | None |
| **Daniel Mackey** | Tested the new CIC flow meter program with the machine learning model to see how they work together. Worked on this with Patryk | Continued to test the new CIC flow meter with the existing machine learning model for compatibility with Patryk | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 17/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued making the frontend with HTML and CSS. I started to explore linking the front end to analytics pages such as Power Bi. | Continued to explore linking frontend to analytics pages. | None |
| **Patryk Kaiser** | Continued to test the new CIC flow meter with the existing machine learning model for compatibility with Daniel | Continued to test the new system with the machine learning with Daniel | None |
| **Daniel Mackey** | Continued to test the new CIC flow meter with the existing machine learning model for compatibility with Patryk | Continued to test the new system with the machine learning with Patryk | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 18/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to explore linking frontend to analytics pages. | Continued to work on the front end | None |
| **Patryk Kaiser** | Continued to test the new system with the machine learning with Daniel | Continued to test the new systems with Daniel | None |
| **Daniel Mackey** | Continued to test the new system with the machine learning with Patryk | Continued to test the new systems with Patryk | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 21/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to work on the front end | Continued to build and work on the front end | None |
| **Patryk Kaiser** | Continued to test the new systems with Daniel | Continued to test the new systems with Daniel | None |
| **Daniel Mackey** | Continued to test the new systems with Patryk | Continued to test the new systems with Patryk | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 22/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Worked on build and work on the front end | Took a break from working on the project to complete other assignments agreed upon by all group members | Took a break to work on up and coming assignments. |
| **Patryk Kaiser** | Continued to test the new systems with Daniel | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Continued to test the new systems with Patryk | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 23/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 24/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 25/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 28/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 29/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 30/11/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 1/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 2/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 5/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Absent for personal reasons | Absent for personal reasons | Absent for personal reasons |
| **Patryk Kaiser** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |
| **Daniel Mackey** | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. | Took a break to work on up and coming assignments. |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 6/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Picked up from where we left off – continued to work on the front end and update all documentation so that I can be uploaded to the github. | Picked up from where we left off – continued to work on the front end and update all documentation so that I can be uploaded to the github. | None |
| **Patryk Kaiser** | Picked up from where we had left off – continued to test the CIC flow meter machine learning model with Daniel. Checked to see what else needed to be done for the program to run smoothly. | Picked up from where we had left off – continued to test the CIC flow meter machine learning model with Daniel. Checked to see what else needed to be done for the program to run smoothly. | None |
| **Daniel Mackey** | Picked up from where we had left off – continued to test the CIC flow meter machine learning model with Patryk. Checked to see what else needed to be done for the program to run smoothly. | Picked up from where we had left off – continued to test the CIC flow meter machine learning model with Patryk. Checked to see what else needed to be done for the program to run smoothly. | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 7/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to update all project documentation. | Continued to update all project documentation. | None |
| **Patryk Kaiser** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |
| **Daniel Mackey** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 8/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to update all project documentation. | Continued to update all project documentation. | None |
| **Patryk Kaiser** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |
| **Daniel Mackey** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |

**Solutions (if any):**

None

**Any other points of note:**

None

**Date:** 9/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Continued to update all project documentation. | Continued to update all project documentation. | None |
| **Patryk Kaiser** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |
| **Daniel Mackey** | Continued to run test on the machine learning model | Continued to run test on the machine learning model | None |

**Solutions (if any):**

None

**Any other points of note:**

None

# Coding Week

**Date:** 12/12/22

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **What have you done?** | **What are you working on?** | **Any Problems?** |
| **Ingrid Melin** | Finished the Project Documentation and uploaded it to the GitHub. Continued to work on the front-end. | The front-end code | None |
| **Patryk Kaiser** | Ran into a problem with the data and generating the data for the Machine learning with Daniel | Worked out a solution for the Dataset and the machine learning with Daniel | Problem with the Dataset for the CIC flow meter |
| **Daniel Mackey** | Ran into a problem with the data and generating the data for the Machine learning with Patryk | Worked out a solution for the Dataset and the machine learning with Daniel | Problem with the Dataset for the CIC flow meter |

**Solutions (if any):**

We needed more data for the machine learning model. So we went back to the original dataset and just added back in the columns that had been taken out I the data pre-processing process and then wrote it to a new CSV file and ran it through the program again.

**Any other points of note:**

None