

International School

**Capstone Project 2**

CMU-SE 451

**Product Backlog – User Story – Sprint Backlog**

**Craft Village Pollution Monitor System**

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**PROJECT INFORMATION**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project acronym** | CVPMS | | |
| **Project Title** | Craft Village Pollution Monitor System | | |
| **Start Date** | 01/03/2023 | **End Date** | 15/05/2023 |
| **Lead Institution** | International School, Duy Tan University | | |
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| **Partner Organization** |  | | |
| **Project Web URL** | [*https://github.com/Casca113s2/craft-village-pollution-monitor-system*](https://github.com/Casca113s2/craft-village-pollution-monitor-system) | | |
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# Product Backlog

**Table 1.** Product Backlog

| **Id** | **Heading** | **As a …** | **I want to ...** | **so that ...** | **Acceptance Criteria** | **Remarks** | **Priority** | **Sprint No** | **Estimate (Hours)** | **Status** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PB01 | Report Feature | Local Authority Household | Fill report form | I can inform problem to development team | - Allow user to report error to the development team |  | 3 | 2 | 30 | Done |  |
| PB02 | Household Survey Feature | Household | Fill my production situation form | Local authority can manage my production situation | - Allow user to provide craft village production information |  | 3 | 1, 2, 5 | 100 | Done |  |
| PB03 | Dashboard Feature | Local Authority | View villages production situation and personal user surveys | I can manage pollution situation | - Allow user to view craft village status and submitted survey |  | 2 | 2 | 20 | Done |  |
| PB04 | Pollution Prediction AI | Household Authority | Have an AI with the ability to predict the pollution types of a craft village from production information automatically and acurately | when combie with submitted pollution information we will know with craft village that have the conflict information about the production information | - Allow user to submit production information and the AI will gave the prediction about the types of pollution that the craft village will be facing |  | 3 | 3, 4 | 400 | Done |  |
| PB05 | Edit Village Feature | Local Authority | Change village information | I can correct and update village |  |  | 3 | 3 | 30 | Done |  |
| PB06 | Fake Training Data | Admin | Generate new model using household data | System can detect pollution more correctly |  |  | 3 | 4 | 200 | Done |  |
| PB07 | Auto Update Village State | Admin | System updates village state | I can check conflicting data |  |  | 3 | 5 | 30 | Done |  |
| PB08 | Download Data Set | Admin | Download village data set | I can build enhanced model in future |  |  | 3 | 5 | 30 | Done |  |
| PB09 | Notification Feature | Local Authority | Know if data is conflicting | I can check what problem occurs |  |  | 3 | 5 | 30 | Done |  |
| PB10 | Register | Household | Create an account | I can login with my own account to access the mobile application/web application | - Username must not contain spaces and not be accented  - Password must be >= 6 characters |  | 3 | 1 | 30 | Done |  |
| PB11 | Authenticate | Household Authority Admin | Login/Logout to web application | I can start to provide the information about the craft village/view craft village's status | - Login with registed account |  | 3 | 1 | 100 | Done |  |
| PB12 | Password Recovery | Household | Recover password when forgot | I can change my password into the new one and get my account back | - Use the code that sent to the account's email which is registered in the profile to change the new password |  | 2 | 1 | 20 | Done |  |
| PB13 | Create Local Authority Account | Admin | Create an local authority account | I can provide the account to the local authority user to manage their local craft village | - Allow the admin to create the a local authority account  - Login with registed account |  | 2 | 2 | 30 | Done |  |
| PB14 | Improve Pollution Detection AI | Personal User | Have an AI with the ability to detect the pollution types from an image automatically and acurately | The application can detect pollutions types automatically with a quick and accureate respone | - Allow user to submit pollution photo and the AI will detect pollution types then sent back to the application |  | 3 | 1, 2 | 200 | Done |  |
| PB15 | Pollution Fillter | Local Authority | Have an Pollution Fillter to sort out the pollution that I need | I can see specific pollution that I need to see | - Allow user to fillter out the types of pollution that they want to see |  | 2 | 5 | 30 | Done |  |
| PB16 | Publish Application | Personal User | Have the application on Google Store | People can download and use it | - Application publish to store |  | 3 | 1, 2, 5 | 30 | Done |  |
| PB17 | Change Language | Personal User | Change the language of the mobile | The application language change from Vietnamese to English and vice versa | - Allow users to change the language of the application from Vietnamese to English and vice versa |  | 1 | 1, 2 | 20 | Done |  |
| PB18 | Deploy Web Application to Online Server | Household Authority Admin | Use the web application on a real server | I can access the web application and it's functions anywhere | - Allow users to access the web application throught ip or domain name (online server) |  | 3 | 1, 3, 4, 5 | 30 | Done |  |
| PB19 | Change Password | Household Authority Admin | Change my old password into a new password | Next time I can login using my new password and protect my account in case of password leak | - Allow user to click "Thay đổi mật khẩu" and change their current password to a new password |  | 3 | 1 | 30 | Done |  |
| PB20 | GPS Tags to Image | Personal User | Attach GPS tags to image | The image can contant the GPS location of pollutions | - Attach GPS tags to image |  | 3 | 2, 3, 4 | 30 | Done |  |
| PB21 | Authorize | Personal User Household Authority Admin | Login/Logout according to the role that has been registed | I can perform the task correctly according to the role | - Login with registed account and perform task according to the registed role |  | 3 | 2 | 100 | Done |  |
| PB22 | Accept/Decline/Add New Village | Local Authority | Accept/Decline a new village that has been submit by a personal user | I can protect the integrity of the craft village data from fault information | - Allow user to accepct or decline the new village that submitted by a personal user and that village belong to their management |  | 3 | 2 | 20 | Done |  |

# Sprint Backlog

## Sprint 1

**Table 2.** Sprint 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint Id | Backlog Id | Description | Owner | Status | Estimate (Hours) | Completed | Pending | Total effort | Effort vs. Estimate | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 |
| 1.1 | PB10 | [FE] Design Web layout | Phuc | Done | 25 | 25 | 0 | 20 | -5 |  |  |  | 25 |  |  |  |  |  |  |  |  |  |  |
| 1.2 | PB10 | [FE] Design UX/UI Login Page For Web Application | Trung | Done | 15 | 15 | 0 | 15 | 0 |  |  | 15 |  |  |  |  |  |  |  |  |  |  |  |
| 1.3 | PB10 | [FE] Design UX/UI Home Page For Web Application | Trung | Done | 15 | 15 | 0 | 15 | 0 |  |  |  |  | 15 |  |  |  |  |  |  |  |  |  |
| 1.4 | PB10 | [FE] Code UX/UI Login Page For Web Application | Nhan | Done | 10 | 10 | 0 | 10 | 0 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.5 | PB10 | [FE] Code UX/UI Home Page For Web Application | Nhan | Done | 10 | 10 | 0 | 7 | -3 |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.6 | PB11 | [FE] Code Login Function For Web Application | Phuc | Done | 8 | 8 | 0 | 5 | -3 |  |  |  |  | 8 |  |  |  |  |  |  |  |  |  |
| 1.7 | PB11 | [FE] Code Logout Function For Web Application | Phuc | Done | 3 | 3 | 0 | 2 | -1 |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  |
| 1.8 | PB10 | [FE] Design UX/UI Register Page For Web Application | Trung | Done | 15 | 15 | 0 | 13 | -2 |  |  |  |  |  | 15 |  |  |  |  |  |  |  |  |
| 1.9 | PB10 | [FE] Code UX/UI Register Page For Web Application | Nhan | Done | 15 | 15 | 0 | 10 | -5 |  |  | 15 |  |  |  |  |  |  |  |  |  |  |  |
| 1.10 | PB10 | [FE] Code Register Function For Web Application | Phuc | Done | 25 | 25 | 0 | 15 | -10 |  |  |  |  |  | 25 |  |  |  |  |  |  |  |  |
| 1.11 | PB14 | [AI] Research Method To Improve AI | Huy | Done | 30 | 30 | 0 | 30 | 0 |  |  |  | 30 |  |  |  |  |  |  |  |  |  |  |
| 1.12 | PB14 | [AI] Crawl Data For Improve AI | Huy | Done | 30 | 30 | 0 | 30 | 0 |  |  |  |  |  |  |  |  |  |  | 30 |  |  |  |
| 1.13 | PB17 | [FE] Code Change Language For Mobile Application | Ca | Done | 25 | 25 | 0 | 30 | 5 |  |  |  |  | 25 |  |  |  |  |  |  |  |  |  |
| 1.14 | PB16 | [FE] Research Method To Publish Application | Ca | Done | 25 | 25 | 0 | 15 | -10 |  |  |  |  |  |  |  | 25 |  |  |  |  |  |  |
| 1.15 | PB16 | [FE] Config Application For Publish Application | Ca | Done | 15 | 15 | 0 | 10 | -5 |  |  |  |  |  |  |  |  |  | 15 |  |  |  |  |
| 1.16 | PB16 | [FE] Publish Application To Google Play | Ca | Done | 10 | 10 | 0 | 8 | -2 |  |  |  |  |  |  |  |  |  |  |  | 10 |  |  |
| 1.17 | PB02 | [BE + DB] Create Question, Question Answer, Household Survey Entity | Phuc | Done | 10 | 10 | 0 | 8 | -2 |  |  |  |  |  |  |  | 10 |  |  |  |  |  |  |
| 1.18 | PB19 | [FE] Code & Design UX/UI Change Password For Web Application | Trung | Done | 15 | 15 | 0 | 12 | -3 |  |  |  |  |  |  |  |  | 15 |  |  |  |  |  |
| 1.19 | PB20 | [FE] Code & Design UX/UI Forget Password For Web Application | Phuc | Done | 15 | 15 | 0 | 9 | -6 |  |  |  |  |  |  |  |  |  |  |  | 15 |  |  |
| 1.20 | PB18 | [BD] Change Oracle Database to MySQL Database | Nhan | Done | 25 | 25 | 0 | 27 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  | 25 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** | 341 | 341 | 0 | 291 | -50 | 10 | 10 | 30 | 55 | 51 | 40 | 0 | 35 | 15 | 15 | 30 | 25 | 0 | 25 |
|  |  |  |  | **Burn down** |  |  |  |  |  | 331 | 321 | 291 | 236 | 185 | 145 | 145 | 110 | 95 | 80 | 50 | 25 | 25 | 0 |
|  |  |  |  | **Ideal Burn down** |  |  |  |  |  | 317 | 292 | 268 | 244 | 219 | 195 | 171 | 146 | 122 | 97 | 73 | 49 | 24 | 0 |

**Figure 1.** Sprint 1 Burn Down Chart

## Sprint 2

**Table 3.** Sprint 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint Id | Backlog Id | Description | Owner | Status | Estimate (Hours) | Completed | Pending | Total effort | Effort vs. Estimate | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 |
| 2.1 | PB03 | [FE] Code & Design UX/UI Add New Local Authority For Web Application(Admin page) | Trung | Done | 15 | 15 | 0 | 10 | -5 |  | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.2 | PB21 | [FE] Design Web layout (Household, Local Authority, Admin) | Phuc | Done | 20 | 20 | 0 | 18 | -2 |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |
| 2.3 | PB01 | [FE] Design UX/UI Report Form For Web Application | Phuc | Done | 10 | 10 | 0 | 8 | -2 |  |  |  | 10 |  |  |  |  |  |  |  |  |  |  |
| 2.4 | PB01 | [FE] Code Report API | Phuc | Done | 15 | 15 | 0 | 12 | -3 |  |  |  |  | 15 |  |  |  |  |  |  |  |  |  |
| 2.5 | PB01 | [FE] Code Report Logic For Web Application | Nhan | Done | 15 | 15 | 0 | 17 | 2 |  | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.6 | PB02 | [BE] Code Question Api | Phuc | Done | 20 | 20 | 0 | 22 | 2 |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |
| 2.7 | PB02 | [BE] Code Question Answer Api | Phuc | Done | 10 | 10 | 0 | 12 | 2 |  |  |  |  |  |  |  |  | 10 |  |  |  |  |  |
| 2.8 | PB02 | [FE] Design Household Survey | Nhan | Done | 5 | 5 | 0 | 4 | -1 |  |  |  |  | 5 |  |  |  |  |  |  |  |  |  |
| 2.9 | PB02 | [FE] Code Declare Household Survey | Nhan | Done | 10 | 10 | 0 | 15 | 5 |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  |
| 2.10 | PB22 | [FE] Design UX/UI Accept/Decline New Village Page For Web Application | Trung | Done | 5 | 5 | 0 | 6 | 1 |  |  |  | 10 |  |  |  |  |  |  |  |  |  |  |
| 2.11 | PB22 | [FE] Code UX/UI Accept/Decline New Village Page For Web Application | Phuc | Done | 10 | 10 | 0 | 8 | -2 |  |  |  |  |  |  |  |  |  | 5 |  |  |  |  |
| 2.12 | PB03 | [FE] Design UX/UI Dashboard Page For Web Application | Nhan | Done | 5 | 5 | 0 | 6 | 1 |  |  |  |  |  |  | 5 |  |  |  |  |  |  |  |
| 2.13 | PB03 | [FE] Code UX/UI Dashboard Page For Web Application | Nhan | Done | 10 | 10 | 0 | 7 | -3 |  |  |  |  |  |  |  |  | 10 |  |  |  |  |  |
| 2.14 | PB03 | [FE] Design UX/UI Declare Page For Web Application (Household) | Trung | Done | 5 | 5 | 0 | 6 | 1 |  |  |  |  | 5 |  |  |  |  |  |  |  |  |  |
| 2.15 | PB03 | [FE] Code UX/UI Declare Page For Web Application (Household) | Phuc | Done | 10 | 10 | 0 | 11 | 1 |  |  |  |  |  |  |  |  |  |  |  | 10 |  |  |
| 2.16 | PB14 | [AI] Retrain AI Model | Huy | Done | 30 | 30 | 0 | 35 | 5 |  |  |  |  | 30 |  |  |  |  |  |  |  |  |  |
| 2.17 | PB14 | [AI] Research Deploy Model To Server | Huy | Done | 20 | 20 | 0 | 17 | -3 |  |  |  |  |  |  |  |  |  |  | 20 |  |  |  |
| 2.18 | PB14 | [AI] Deploy Model To Server | Huy | Done | 5 | 5 | 0 | 3 | -2 |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  |
| 2.19 | PB17 | [FE] Update Change Language Function | Ca | Done | 30 | 30 | 0 | 24 | -6 |  |  |  |  |  |  |  | 30 |  |  |  |  |  |  |
| 2.20 | PB20 | [FE] Update Craft Page | Ca | Done | 20 | 20 | 0 | 15 | -5 |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |
| 2.21 | PB16 | [FE] Deploy New Version To Store | Ca | Done | 2 | 2 | 0 | 3 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** | 272 | 272 | 0 | 259 | -13 | 0 | 30 | 20 | 20 | 55 | 10 | 25 | 30 | 20 | 5 | 20 | 35 | 0 | 2 |
|  |  |  |  | **Burn down** |  |  |  |  |  | 272 | 242 | 222 | 202 | 147 | 137 | 112 | 82 | 62 | 57 | 37 | 2 | 2 | 0 |
|  |  |  |  | **Ideal Burn down** |  |  |  |  |  | 253 | 233 | 214 | 194 | 175 | 155 | 136 | 117 | 97 | 78 | 58 | 39 | 19 | 0 |

**Figure 2.** Sprint 2 Burn Down Chart

## Sprint 3

**Table 4.** Sprint 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint Id | Backlog Id | Description | Owner | Status | Estimate (Hours) | Completed | Pending | Total effort | Effort vs. Estimate | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 |
| 3.1 | PB05 | [FE] Design Edit Village Page | Phuc | Done | 20 | 20 | 0 | 18 | -2 |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |
| 3.2 | PB05 | [FE] Implement Map | Nhan | Done | 30 | 30 | 0 | 40 | 10 |  |  |  |  |  |  |  |  | 30 |  |  |  |  |  |
| 3.3 | PB05 | [FE] Code Edit Village Feature | Phuc | Done | 20 | 20 | 0 | 25 | 5 |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |
| 3.4 | PB05 | [BE] Code Update Village API | Phuc | Done | 20 | 20 | 0 | 15 | -5 |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |
| 3.5 | PB04 | [AI] Research Prediction AI | Huy | Done | 30 | 30 | 0 | 35 | 5 |  |  |  |  |  | 30 |  |  |  |  |  |  |  |  |
| 3.6 | PB04 | [AI] Research API For Prediction AI | Huy | Done | 30 | 30 | 0 | 32 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  | 30 |
| 3.7 | PB04 | [AI] Create Data For Prediction AI | Trung | Done | 60 | 60 | 0 | 70 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  | 60 |
| 3.8 | PB20 | [FE] Research Image Standard And Tags | Ca | Done | 30 | 30 | 0 | 32 | 2 |  |  |  |  |  | 30 |  |  |  |  |  |  |  |  |
| 3.9 | PB20 | [FE] Attach GPS Tags For Image | Ca | Done | 30 | 30 | 0 | 25 | -5 |  |  |  |  |  |  |  |  |  |  |  |  | 30 |  |
| 3.10 | PB18 | [BE] Deploy Backend To Server | Nhan | Done | 30 | 30 | 0 | 35 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  | 30 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** | 300 | 300 | 0 | 327 | 27 | 0 | 0 | 0 | 20 | 0 | 100 | 0 | 0 | 30 | 0 | 0 | 0 | 30 | 120 |
|  |  |  |  | **Burn down** |  |  |  |  |  | 300 | 300 | 300 | 280 | 280 | 180 | 180 | 180 | 150 | 150 | 150 | 150 | 120 | 0 |
|  |  |  |  | **Ideal Burn down** |  |  |  |  |  | 279 | 257 | 236 | 214 | 193 | 171 | 150 | 129 | 107 | 86 | 64 | 43 | 21 | 0 |

**Figure 3.** Sprint 3 Burn Down Chart

## Sprint 4

**Table 5.** Sprint 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint Id | Backlog Id | Description | Owner | Status | Estimate (Hours) | Completed | Pending | Total effort | Effort vs. Estimate | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 |
| 4.1 | PB06 | [BE + DB] Code DataSet Entity | Phuc | Done | 20 | 20 | 0 | 15 | -5 |  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |
| 4.2 | PB04 | [AI] Create Data For Prediction AI | Trung | Done | 60 | 60 | 0 | 80 | 20 |  |  |  |  |  |  |  |  |  |  |  |  |  | 60 |
| 4.3 | PB06 | [BE] Code DataSet API | Phuc | Done | 20 | 20 | 0 | 16 | -4 |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |
| 4.4 | PB06 | [DB] Generate Store Procedure Update DataSet | Phuc | Done | 30 | 30 | 0 | 25 | -5 |  |  |  |  |  |  |  |  |  | 30 |  |  |  |  |
| 4.5 | PB06 | [AI] Process Data For AI Trainning | Nhan | Done | 20 | 20 | 0 | 23 | 3 |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.6 | PB14 | [AI] Train Prediction AI Model | Huy | Done | 30 | 30 | 0 | 30 | 0 |  |  |  |  | 30 |  |  |  |  |  |  |  |  |  |
| 4.7 | PB14 | [AI] Write API For Prediction AI | Huy | Done | 25 | 25 | 0 | 20 | -5 |  |  |  |  |  |  |  |  | 25 |  |  |  |  |  |
| 4.8 | PB14 | [AI] Deploy Model To Server | Huy | Done | 5 | 5 | 0 | 3 | -2 |  |  |  |  |  |  |  |  |  | 5 |  |  |  |  |
| 4.9 | PB05 | [BE] Layout Survey Marker on Map | Nhan | Done | 15 | 15 | 0 | 13 | -2 |  |  |  | 15 |  |  |  |  |  |  |  |  |  |  |
| 4.10 | PB20 | [FE] Attach GPS Tags For Image Using EXIF Standard | Ca | Done | 30 | 30 | 0 | 32 | 2 |  |  |  |  |  | 30 |  |  |  |  |  |  |  |  |
| 4.11 | PB20 | [FE] Update Craft Page | Ca | Done | 15 | 15 | 0 | 12 | -3 |  |  |  |  |  |  |  |  |  | 15 |  |  |  |  |
| 4.12 | PB05 | [FE] View Sumitted Survey | Nhan | Done | 20 | 20 | 0 | 15 | -5 |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |
| 4.13 | PB18 | [BE] Deploy New Backend Version To Server | Nhan | Done | 15 | 15 | 0 | 12 | -3 |  |  |  |  |  |  |  |  |  |  | 15 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** | 305 | 305 | 0 | 296 | -9 | 0 | 20 | 20 | 15 | 30 | 50 | 20 | 0 | 25 | 50 | 15 | 0 | 0 | 60 |
|  |  |  |  | **Burn down** |  |  |  |  |  | 305 | 285 | 265 | 250 | 220 | 170 | 150 | 150 | 125 | 75 | 60 | 60 | 60 | 0 |
|  |  |  |  | **Ideal Burn down** |  |  |  |  |  | 283 | 261 | 240 | 218 | 196 | 174 | 153 | 131 | 109 | 87 | 65 | 44 | 22 | 0 |

**Figure 4.** Sprint 4 Burn Down Chart

## Sprint 5

**Table 6.** Sprint 5

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint Id | Backlog Id | Description | Owner | Status | Estimate (Hours) | Completed | Pending | Total effort | Effort vs. Estimate | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 | Day 11 | Day 12 | Day 13 | Day 14 |
| 5.1 | PB07 | [AI] Generate Training Data From Json | Huy | Done | 30 | 30 | 0 | 30 | 0 |  |  |  |  | 30 |  |  |  |  |  |  |  |  |  |
| 5.2 | PB07 | [AI] Implement New Model | Huy | Done | 30 | 30 | 0 | 30 | 0 |  |  |  |  |  |  |  |  |  |  |  | 30 |  |  |
| 5.3 | PB07 | [FE] Code Update Required Question Feature | Nhan | Done | 20 | 20 | 0 | 25 | 5 |  |  |  | 20 |  |  |  |  |  |  |  |  |  |  |
| 5.4 | PB08 | [BE] Code Get Data Set API | Phuc | Done | 20 | 20 | 0 | 15 | -5 |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.5 | PB08 | [BE] Code Call Predict API With Data Set | Phuc | Done | 20 | 20 | 0 | 12 | -8 |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |
| 5.6 | PB02 | [BE] Refactor Question and Question Answer and Household Survey | Phuc | Done | 10 | 10 | 0 | 15 | 5 |  |  |  |  |  |  |  |  | 10 |  |  |  |  |  |
| 5.7 | PB08 | [FE] Code Download Data Set Feature For Web Application | Nhan | Done | 20 | 20 | 0 | 18 | -2 |  |  |  |  |  |  |  | 20 |  |  |  |  |  |  |
| 5.8 | PB09 | [BE] Code Notification API | Phuc | Done | 10 | 10 | 0 | 12 | 2 |  |  |  |  |  |  |  |  |  | 10 |  |  |  |  |
| 5.9 | PB09 | [FE] Code Notification Feature | Nhan | Done | 20 | 20 | 0 | 25 | 5 |  |  |  |  |  |  |  |  |  |  |  | 20 |  |  |
| 5.10 | PB18 | [AI] Deploy Model To Server | Huy | Done | 5 | 5 | 0 | 6 | 1 |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |
| 5.11 | PB18 | [BE] Deploy Backend To Server | Nhan | Done | 15 | 15 | 0 | 10 | -5 |  |  |  |  |  |  |  |  |  |  |  |  |  | 15 |
| 5.12 | PB16 | [FE] Code Fillter For Pollution Types | Phuc | Done | 15 | 15 | 0 | 12 | -3 |  |  |  |  |  |  |  |  |  |  |  |  | 15 |  |
| 5.13 | PB15 | [FE] Deploy New Version To Store | Ca | Done | 3 | 3 | 0 | 2 | -1 | 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | **Total** | 218 | 218 | 0 | 212 | -6 | 3 | 20 | 0 | 20 | 30 | 0 | 0 | 40 | 10 | 10 | 0 | 50 | 20 | 15 |
|  |  |  |  | **Burn down** |  |  |  |  |  | 215 | 195 | 195 | 175 | 145 | 145 | 145 | 105 | 95 | 85 | 85 | 35 | 15 | 0 |
|  |  |  |  | **Ideal Burn down** |  |  |  |  |  | 202 | 187 | 171 | 156 | 140 | 125 | 109 | 93 | 78 | 62 | 47 | 31 | 16 | 0 |

**Figure 5.** Sprint 5 Burn Down Chart

# Impediments

**Table 7.** Impediments

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Id** | **Description** | **Raised By** | **Raised On** | **Owner** | **Status** | **Resolution** | **Resolved On** |
| 1 | Don't have Android phone to test application | Ca | 01/Mar/23 | Ca | Done | Buy a phone from the shop | 03/Mar/23 |
| 2 | Computer broke and I need three days for repair | Trung | 09/Mar/23 | Trung | Done | Bring the computer to the repair shop | 11/Mar/23 |
| 3 | I still haven't got the database software to work with | Trung | 03/Sep/22 | Phuc | Done | Use a remote software to help install the database software | 03/Sep/22 |
| 4 | I can't contact the group members immediately when I need to ask about problems in the project | Phuc | 01/Apr/23 | Ca | Done | Set up a meeting with the team and agree that we will have a daily meeting | 01/Apr/23 |
| 5 | I can't keep up with the daily meeting because I still have to go to school and the internship | Huy | 01/Apr/23 | Ca | Done | Set up a meeting with the team and agree that we will have a meeting every two or three days and the schedule will be set up in advance | 03/Apr/23 |
| 6 | I struggling to understand how to use the workflow and would like someone to help me out | Ca | 18/Apr/23 | Phuc | Done | The onwer will set up a meeting with the member for support | 19/Apr/23 |
| 7 | I don't have an Android phone to test the mobile application | Nhan | 01/May/23 | Ca | Done | Lend him the Android phone | 03/May/23 |
| 8 | AWS server shutdown for no reason | Ca | 04/Mar/23 | Nhan | Done | Rent VPS server | 06/Mar/23 |

# Retrospective

**Table 8.** Retrospective

| **Sprint #** | **Sprint #** | **Owner** | **Start Doing (Improvement)** | **Continue Doing (What Went Well)** | **Stop Doing (Even better if)** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | Huy |  |  | Let daily meeting become discussions. Keep them short. |  |
| 1 | 2 | Ca |  |  | Having conversations via email and not in the task. |  |
| 1 | 2 | Phuc |  | Attend meeting on time. |  |  |
| 2 | 3 | Huy | We completed the user stories we set out to do. |  |  |  |
| 2 | 3 | Ca |  |  | We didn't finish all the user stories. |  |
| 2 | 3 | Trung | We should start doing individual code reviews as we go. |  |  |  |
| 2 | 3 | Phuc |  | We should increase the amount we communicate as a team. |  |  |
| 3 | 4 | Ca | We were able to demo a working product to the mentor. |  |  |  |
| 3 | 4 | Phuc |  | We should continue having regular demos with the mentor. |  |  |
| 3 | 4 | Trung | Collect mentor feedback on new features. |  |  |  |
| 3 | 4 | Huy | Going through the entire Bug log. |  |  |  |
| 3 | 4 | Trung |  | We should continue working as a team. |  |  |
| 3 | 4 | Phuc | Review stories with mentor before implementation. |  |  |  |
| 4 | 5 | Trung |  | Great teamwork. |  |  |