**Schedule and Work Plan**

The following table sets out our plan for the 36 months of the project. It consists of three main phases in which we plan to iterate the elements of the research: using the technology, harvesting the data, analyzing the data using advanced techniques, generating insights, validating outcomes, and refining the intervening mechanisms.

|  |  |  |
| --- | --- | --- |
| **Phase** | **Duration** **(months)** | **Main Activities** |
| Setting up | 5 | * Set up the sensors and the required equipment
* Set up the data infrastructure
* Set up the conceptual data mining models
* Run a short pilot
 |
| **1st Iteration** **Activation and building of the model** | 5 | * Activate the sensor system
* Collect and validate real-time and static data
* Analyze and build the Poriya emergency room (ER) model
* Provide insights into violence identification and crowdedness measures
 |
| **2nd Iteration****Identification of violence** | 6 | * Activate the sensor system
* Collect and validate real-time and static data
* Validate the data model and define the ER load
* Analyze the results using a variety of techniques
* Achieve identification of verbal violence
* Provide insights into potential interventions
* Establish ad hoc machine learning algorithms into/with the existing environment
 |
| **3rd Iteration****Interventions**  | 8 | * Activate the sensor system
* Collect and validate real-time and static data
* Validate the ER load
* Analyze the results using a range of techniques
* Achieve identification of verbal violence
* Demonstrate interventions
* Perform comparative analysis of the models
 |
| Preconclusions | 6 | * Establish additional DM and AI algorithms
* Draw comparisons between initial and current uses of the algorithm
* Crystallize concepts, values, and benefits between sets
 |
| Conclusions | 6 | * Validate, customize, and adapt the machine learning outputs
* Carry out reflection and summary activities
 |

The activities in the first year focus on the preparations for the pilot, and numerous technical issues should be resolved at this stage, including the positioning and use of the equipment (sensors and cameras) and the implementation of the database for the entire real-time data collection substage. The pilot will run in the second (and possibly into the third) year, allowing us to examine the results and activate comparative data mining and machine learning models (“model” means “algorithm + data”). The activities in the third year will include the implementation of additional models to challenge and verify our existing models, an important stage that will leverage the precision and accuracy of our research model. The final substage will take account of all the results, enabling us to determine and set up consistent rule-based criteria.