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| **Data Extraction Form** | | | | | | | | | | | | | | | | | | | | | | | |
| **Title** | We’ll Fix It in Post: What Do Bug Fixes in Video Game Update Notes Tell Us? | | | | | | | | | | **Authors(s)** | | Andrew Truelove, Eduardo Santana de Almeida, Iftekhar Ahmed | | | | | | | | | | |
| **Year** | 2021 | | | | | | | | | | **Venue** | | * Journal | | * **Conference** | | | | | * Other \_\_\_\_\_\_\_\_\_\_ | | | |
| **Quality Assessment criteria** | | | | * **QC1** | | | | * **QC2** | | | | | * **QC3** | | * QC4 | | | | | * **QC5** | | | * **QC6** |
| **Inclusion Criteria** | | | | * IC1 | | | | * **IC2** | | | | | * **IC3** | | | * **IC4** | | | | * **IC5** | | | |
| **Exclusion Criteria** | | | | * EC1 | | | * EC2 | | * EC3 | | | | * EC4 | * EC5 | | | | | * EC6 | | * EC7 | | |
| **Approach Used**   * Supervised Machine Learning algorithms * Unsupervised Machine Learning algorithms * Natural language processing * Deep Learning algorithms * Data mining based techniques * **Statistical Method Tool(cosine similarity measure)** * Other | | | | | | | | | | **Type of Solution** | | | | | | | | **Yes** | | **No** | | **Unclear** | |
| Novel Technique (Method, Tool, Technique) | | | | | | | | Check mark, Wingdings font, character code 252 decimal. | |  | |  | |
| Evaluation of existing techniques  (Evaluation framework, tool, platform) | | | | | | | | Check mark, Wingdings font, character code 252 decimal. | |  | |  | |
| Supporting techniques | | | | | | | | Check mark, Wingdings font, character code 252 decimal. | |  | |  | |
| **Review dataset** | | **Total number of apps** | | | | 30 Games | | | | **Evaluation Metric Used** | | | | | | | | Proportion of bug fixes | | | | | |
| **Total number of crawled reviews** | | | | 12,122 bugs | | | |
| **Year** | | | | N/A | | | |
| **Research Type Facet**   * Validation Research * **Evaluation Research** * **Solution Proposal** * Philosophical Papers * **Opinion Papers** * Experience Papers | | | | | **Solution Type**   * **Single** * Hybrid/Integrated | | | | | | | **Contribution**   * Technique * Tool * Comparison * Model * Framework * Prototype * **Taxonomy** | | | | | **Evaluation Strategy**   * **Survey** | | | | | | |
| **Features used**   * Categorical * **Textual** * Both | | | | | | |
| **Factors Considered** | | | Bug fixes taken form app updates, Frequency of bugs in games | | | | | | | | | | | | | | | | | | | | |
| **Notes** | | |  | | | | | | | | | | | | | | | | | | | | |
| **Limitations** | | | * Manually evaluated these fixes to find the true recurring bugs (the line of code which have more similarity with) * Bug fixes does not classify and categorize the bugs | | | | | | | | | | | | | | | | | | | | |
| **Description / Summary** | | | To address shortcomings of this prior taxonomy and to attain a deeper understanding of the types of bugs in games, they expanded the taxonomy of bug types. They have analyzed 12,122 bug fixes taken from 723 updates for 30 popular games on the Steam platform. They have further categorized these bug fixes using our taxonomy of bug types. Then analyzed the frequency at which the different bug types appear in the update notes and investigated which types of bugs recur more often over multiple updates. Additionally, they investigated which types of bugs most frequently appear in urgent updates or hotfixes, as the bugs that appear in these updates are more likely to have a severe negative impact on users. | | | | | | | | | | | | | | | | | | | | |