

Measuring Software Ticket Quality using Quantitative Data Analysis

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Introduction

- Software engineering is becoming more complex as technology has become ubiquitous
- Harder to plan, manage and track work during development lifecycle
- Solution? Issue tracking systems!
- **Software Tickets** are the core component of such systems

Software Tickets

- They have many components: summary, description, attachments, comments...
- They usually come in one of 2 forms: feature requests and bug reports
- However, how can one determine whether they are of **High Quality**?
- This is what our research contributes to the community

The screenshot shows a software ticket interface for 'Angry Nerds / ANGRY-304' titled 'Red Angry Nerd is scary'. The interface includes a top navigation bar with buttons for 'Edit', 'Comment', 'Assign', 'More', 'Start Progress', 'Resolve Issue', 'Workflow', and 'Admin'. Callouts highlight the 'Log work, attach files & screenshots, create sub-tasks, move, link, or clone the issue.' and 'Transition the issue in its workflow here'.

The ticket details are as follows:

- Type:** Bug
- Priority:** Low
- Component/s:** None
- Labels:** None
- Monkey:** Cheeky Monkey
- Status:** Waiting for Triage (View Workflow)
- Resolution:** Unresolved
- Fix Version/s:** None

The **Description** section contains the text 'Click to add description'.

The **Attachments** section shows a file named 'hydra.jpg' (67 kB) uploaded on 21/Mar/13 3:38 PM.

The **People** section lists the Assignee (Susan Griffin), Reporter (Bartek Gatz), and options to 'Vote for this issue' and 'Start watching this issue'.

The **Dates** section shows the Created date (21/Mar/13 3:37 PM), Updated date (16/May/13 3:36 PM), Scheduled date (21/Mar/13), and Deployment Date.

The **Development** section includes a 'Create Branch' link, with a callout stating 'To create a code branch in Bitbucket or Stash, click the Create Branch link'.

The **Agile** section has a 'View on Board' link.

The **Analytics** section is currently empty.

The **Activity** section at the bottom has tabs for 'All', 'Comments', 'History', 'Activity', 'Source', 'Reviews', 'Transitions Summary', 'Commits', and 'Builds'.

Related Work

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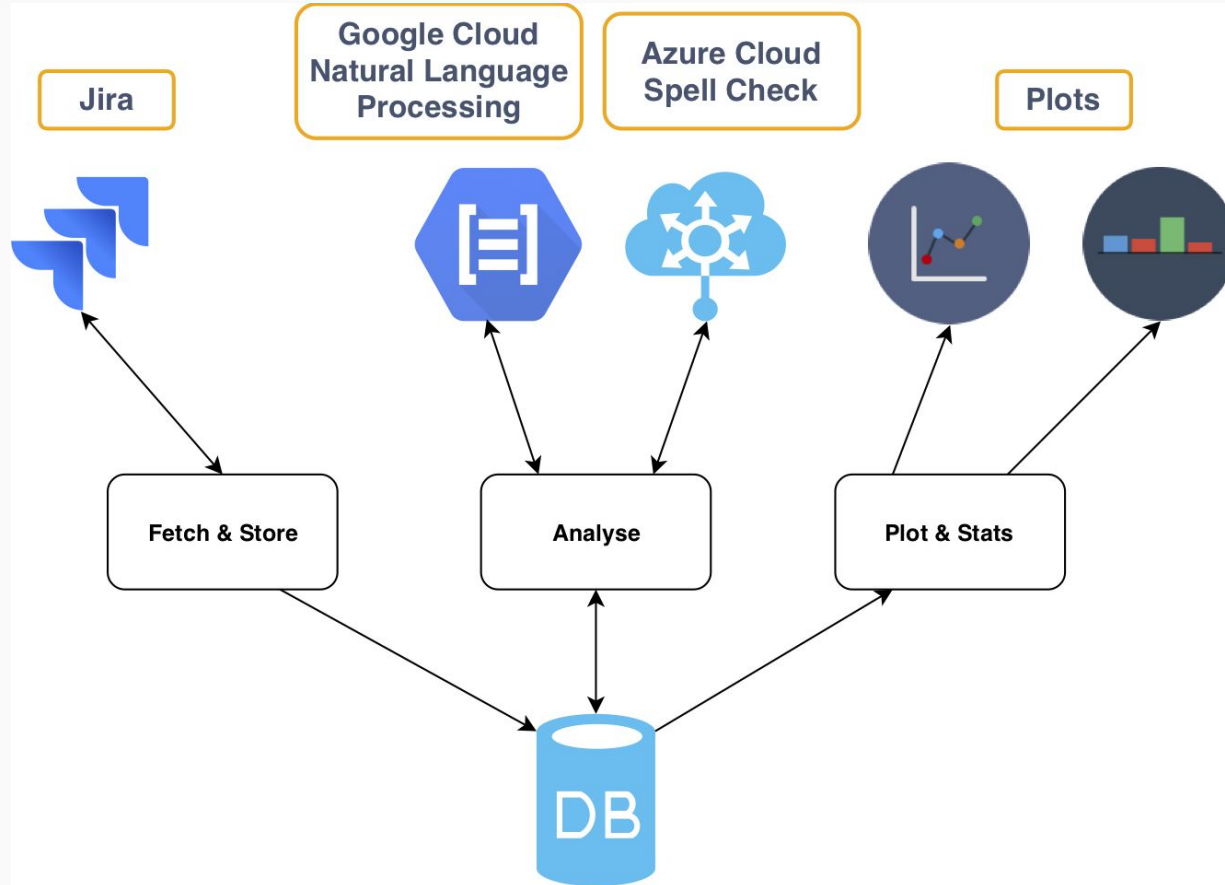
Building the Data Set

- Need of a tool for storing, analyzing, plotting and running statistical tests
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The Almighty Ticket Guru



Ticket Guru Flow



Attachments analysis

