VCU BIOMEDICAL VISUALIZATION

The Backlog Boys (and Girls (of CIT))

“Create a program that allows a user to see the correlations and relations between medical terms.”
Medical Professionals
connections between symptoms and diseases as well as diseases and cures

Medical Students
comprehensive structure in order to learn more about the relationships between medical drugs, diseases, and symptoms

Lab Researchers
complicated visualization in order to identify relationships in order to develop future programs to sample from the data

People with Limited Medical Knowledge
comprehensive and easy-to-understand database in order to read up on the medical issue pressing to situation
The Website
Development Strategies

- The data was originally formatted as **TAB SEPARATED VALUES**
- Because each data record consists of words connected to other words with a similarity score, we reformatted the data into a graph database consisting of nodes and relationships.
- This made it simple to obtain all of a given word’s relationships.

Auto-Generated Visualization
(25 Terms)
Search for **closest words** using...
- Levenshtein distance metric

Display **relationships**...
- Of range of likelihood scores
- Between certain selected semantic types

**Pan and zoom** functions allow users to...
- Move the SVG graphics
- Zoom in on relationships
Client: Dr. Bridget McInnes

Expert in NLP, Professor at VCU

Knowledge in Computer Science
Our Approach

Scrum Project Management

Three main activities: Creation of Program, Documentation, Presentation

Split the product into increments

Team Documentation Folder, Google Drive
SCRUM Project Management Technique Cont.

**Sprints:** 2 weeks

Followed by a Client Meeting

**Techniques:**

- Daily Standups
- Self-Assigning Team
- Utilized Product Backlog & Sprint Backlog

Product Backlog
<table>
<thead>
<tr>
<th>Start</th>
<th>Stop</th>
<th>Continue...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holding Daily Scrum or other types of Group Meetings daily instead of two days per week.</td>
<td>Not Anticipating Spring Break, taking that time out of schedule</td>
<td>Holding Daily Scrum meetings to decide on weekly jobs.</td>
</tr>
<tr>
<td>Recording a log of bugs and glitches we experienced to aid future development processes.</td>
<td>Strict Daily Documentation; it slowed down the development process</td>
<td>Planning and preparing for client meetings at least one week in advance</td>
</tr>
<tr>
<td>Developing a group collaborative calendar for upcoming dates.</td>
<td>Scope of the Terms was initially too large as too many types slowed the creation process.</td>
<td>Utilizing a Group Chat to keep on track with communication</td>
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</tbody>
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