ExplainShell for Chrome

Jacob Zimmerman, Justin Gallagher, Ted Li, Howard Chen

Carnegie Mellon University

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ExplainShell
for Chrome

Jacob
Zimmerman,
Justin
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Problem

Approach

Literature
Review

Benefits

Qualifications

Summary

Table of Contents

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Problem

- Random code snippets pose threat to unsuspecting web users
  - people have a risk of running malicious or insecure commands
- Often difficult to look through `man` pages for relevant documentation
- Sites like explainshell.com make this easier, but there's still a barrier
  - Have to copy, navigate to another page, paste

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Approach: Plan

1. Context menu link (select text and go)
2. In-page link to jump to explainshell.com
3. Insert in-page summary on hover
   - Contribute programmable API back to explainshell.com to facilitate in-page summary
4. Analytics site to show trending commands, referring sites, popular pages, etc.

ExplainShell
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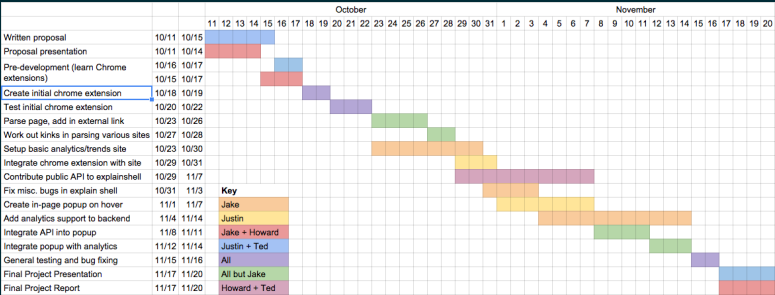Jacob
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Approach: Timeline

			October																			November																			
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Written proposal	10/11	10/15																																									
Proposal presentation	10/11	10/14																																									
Pre-development (learn Chrome extensions)	10/16	10/17																																									
Create initial chrome extension	10/18	10/19																																									
Test initial chrome extension	10/20	10/22																																									
Parse page, add in external link	10/23	10/26																																									
Work out kinks in parsing various sites	10/27	10/28																																									
Setup basic analytics/trends site	10/23	10/30																																									
Integrate chrome extension with site	10/29	10/31																																									
Contribute public API to explainshell	10/29	11/7																																									
Fix misc. bugs in explain shell	10/31	11/3		Key																																							
Create in-page popup on hover	11/1	11/7		Jake																																						
Add analytics support to backend	11/4	11/14		Justin																																						
Integrate API into popup	11/8	11/11		Jake + Howard																																					
Integrate popup with analytics	11/12	11/14		Justin + Ted																																					
General testing and bug fixing	11/15	11/16		All																																						
Final Project Presentation	11/17	11/20		All but Jake																																				
Final Project Report	11/17	11/20		Howard + Ted																																				

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Approach: Methodology

- Chrome Extension: HTML/CSS/JavaScript
- explainshell.com (API)
- Backend for analytics and trends: Node.js
- VC with Git (hosted on GitHub)
- github.com/justingallagher/explainshell-for-chrome

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Literature Review

- explainshell.com and `man` pages
  - very comprehensive
  - hard to find new things to learn

- bashoneliners.com
  - documents bash one-liners
  - sorts by popularity
  - limited by what is posted to site

- linuxcommand.org
  - beginner's tutorial to the command line environment
  - hard to quickly grok

- tldp.org
  - incredibly widespread documentation on all things Linux
  - again, hard to quickly grok

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Benefits

- User can easily look up shell commands and determine what they do
- Educate user in bash
- Allow users to avoid running malicious or insecure commands

Qualifications

- Jake Zimmerman
  - 1 year full-stack web development
  - Interned at Bloomberg L.P. working on software engineering

- Justin Gallagher
  - 2 years of full-stack web development
  - Interned at Microsoft writing ASP.NET web apps

- Ted Li
  - Experience in iOS and web programming
  - Interned at Bloomberg L.P. doing natural language processing

- Howard Chen
  - Strong background in algorithmic thinking (15-210)
  - Taught principles of programming and software development, summer 2014

Summary