

Portfolio

CraigslistAutoRespond.com

- People applying for jobs on Craigslist have a small chance of getting any particular job and thus frequently lose motivation and stop trying at all.
 - This program automatically applies for jobs by parsing Craigslist's RSS feeds and sending out emails (with attachments) for ads of interest.
 - It's built with Python, MySQL, & PHP.
 - It can accommodate any number of users.
 - Multiple acquaintances received offers by using it.
 - Try it! – www.craigslistautorespond.com

Venn Diagram Teacher

- Students preparing for the Law School Admission Test (LSAT) frequently have trouble visualizing and manipulating Venn diagrams in their head. Ex: “Some A’s are B’s, most B’s are C’s, all C’s are D’s”.
 - This program teaches students how to visualize Venn diagrams by allowing them to manipulate the diagrams by dragging the circles and changing their sizes.
 - It’s built with Processing (a library for Java).
 - Try it! - goo.gl/XokqcH

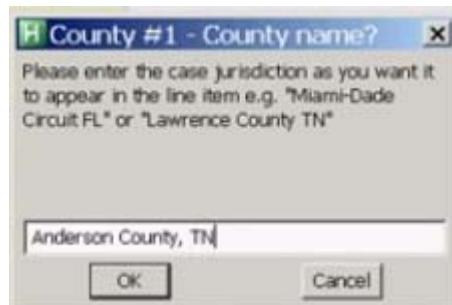
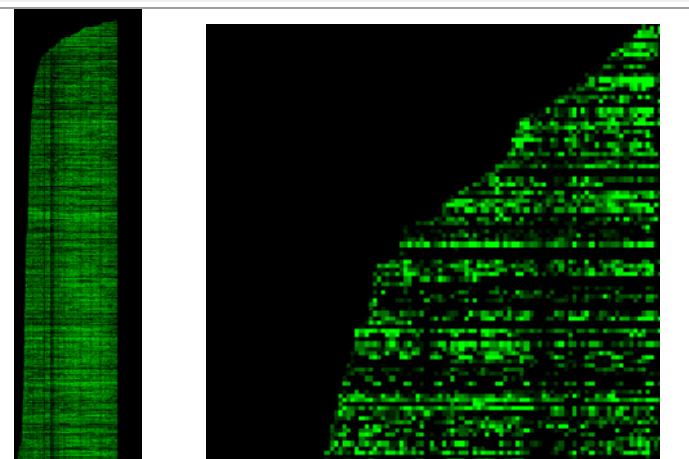
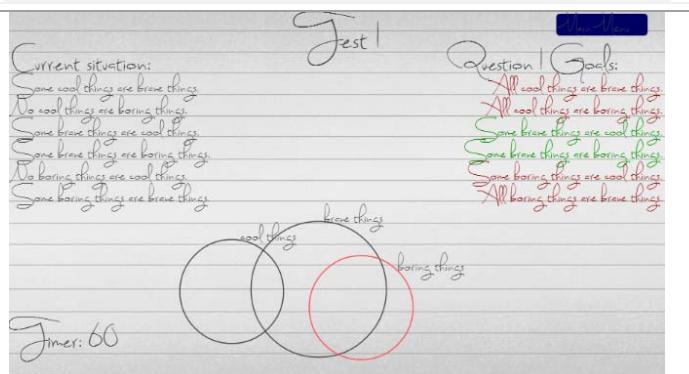
Taxi Credit Card Machine Usage Visualizer

- I worked for a company that manages the credit card machines in ~1800 Washington, DC taxis. Employees had a hard time getting a sense of the “big picture” of the *variation* in how the machines were being used.
 - This graph makes it easy for employees to get an overall sense of the variation in the use of the credit card machines by displaying each taxi as a separate pixel-row and each day as a separate pixel-column, with the color of each pixel depending on how much money in credit card fares the taxi took that day.
 - It’s built with Pandas (a library for Python) and Processing (a library for Java).

Thomson Reuters Billing Assistant

- Employees at Thomson Reuters have time-consuming billing forms to fill out every week. The forms must be completed while following certain best practices.
 - This program prompts employees for any important information and then fills out the forms while following best practices, saving a substantial amount of time.
 - I was given a raise and promotion for making this.
 - It's built with AutoHotkey (Windows automation tool).
 - Watch me use it! – <http://goo.gl/xJ88JM>

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Senior .Net Developer (Washington, DC) - Hello, I'd like to be considered for the Front End Developer (UI) - Digital Agency (Washington DC) - Hello, I'd like to be
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Oracle SOA Java Developers Needed (DC Metro Region) - Hello, I'd like to be co
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Senior Web Developer - PHP, HTML, CSS, Javascript (Washington, DC) - Hello,
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Web Developer - Hello, I'd like to be considered for the position. I have attached
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Senior .NET Developer at Thycotic - Agile Software Company (Downtown DC) - 1
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Web Designer / Interface Specialist / Front End Developer (Washington, DC) - H
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Mid/Sr. Full Stack Web Developer (Washington DC) - Hello, I'd like to be consider
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	XSLT Developer - Hello, I'd like to be considered for the position. I have attached
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Enterprise-Level .Net Developer (Washington DC) - Hello, I'd like to be consider
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Senior SQL Server Developer (Washington DC) - Hello, I'd like to be considered
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	SQL Server developer (washington dc) - Hello, I'd like to be considered for the p
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Software Engineer - Immediate Need Active ATF clearance (Washington, DC) - I
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	.NET Developer/Project Leader (Washington, DC) - Hello, I'd like to be consider
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Java/AngularJS Developer Opportunity - Hello, I'd like to be considered for the pc
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Full Stack PHP Developer - Hello, I'd like to be considered for the position. I have
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	me	Junior-level Java developer (washington dc) - Hello, I'd like to be considered for



<h3>Finding the Rare/Hard Words in a Large Document</h3> <ul style="list-style-type: none"> • People studying for the LSAT frequently have trouble understanding the rarer words that show up on the test. • This program helps students improve their vocabulary by automatically finding and listing the hardest words that have ever shown up on the LSAT. • It's built with Python. • It works by generating a list of words that have shown up in past LSAT tests, the Twilight trilogy, and the Harry Potter books. Any word that shows up in Twilight or Harry Potter is assumed to be less challenging. 	<p>3465. merits 3466. mesopotamia 3467. mesopotamian 3468. metaphor 3469. metaphorical 3470. metaphors 3471. meteorite 3472. meteorites 3473. meteorologists 3474. methane 3475. methodological 3476. methodologies 3477. methodology 3478. meticulous 3479. metrobank 3480. metropolitan</p>																											
<h3>Determine the Highest-Spending Taxi Passengers</h3> <ul style="list-style-type: none"> • The taxi-credit-card-machine company I worked for wanted to know which passengers were taking the most fares so it could reward them, but our database GUI would only list individual transactions. • This program let my boss see his best customers by listing all the different customers we'd had, ranked by how much each one had spent over the past few months. <u>Its input was hundreds of thousands of transactions.</u> • It's built with Python and Pandas (a library for Python). 	<table border="1"> <tbody> <tr><td>72</td><td>/PETER WILLIAMS</td><td>\$372.87</td></tr> <tr><td>73</td><td>/DANIEL BRICKFIELD</td><td>\$369.08</td></tr> <tr><td>74</td><td>WILSON OFLAHERTY</td><td>\$367.60</td></tr> <tr><td>75</td><td>/MICHAEL ESPY</td><td>\$367.47</td></tr> <tr><td>76</td><td>/CHRISTOPHER WRIGHT</td><td>\$365.97</td></tr> <tr><td>77</td><td>/KATHERINE SMITH</td><td>\$365.90</td></tr> <tr><td>78</td><td>/MICHAEL ENGLISH</td><td>\$365.38</td></tr> <tr><td>79</td><td>/PAMELA BARNARD</td><td>\$364.61</td></tr> <tr><td>80</td><td>/JOSEPH MULHOLLAND</td><td>\$364.39</td></tr> </tbody> </table> <p>(Names changed)</p>	72	/PETER WILLIAMS	\$372.87	73	/DANIEL BRICKFIELD	\$369.08	74	WILSON OFLAHERTY	\$367.60	75	/MICHAEL ESPY	\$367.47	76	/CHRISTOPHER WRIGHT	\$365.97	77	/KATHERINE SMITH	\$365.90	78	/MICHAEL ENGLISH	\$365.38	79	/PAMELA BARNARD	\$364.61	80	/JOSEPH MULHOLLAND	\$364.39
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<h3>Partial Automation of Inserting Copyright Notices</h3> <ul style="list-style-type: none"> • The math forum "The Art of Problem Solving" needed to insert copyright notices for hundreds of math problems. The task varied enough to make an all-at-once solution impossible. • I walked through the steps to do the task manually and then developed a script that would automate the process except for the crucial decisions. I finished the entire assignment in a fraction of the expected time. The 5th-in-his-class Princeton grad who had asked for help wrote <u>"Wow; thanks. You really crushed that."</u> • It's built with AutoHotkey. • Check out the thread (w/ code)! – http://goo.gl/TuC1AY 	<table border="1"> <thead> <tr> <th>Author</th><th>Message</th></tr> </thead> <tbody> <tr> <td>  rruszczyk Administrator  Posts: 11784 Location: Alpine, CA Blog: View Blog </td><td> <p>We need community members to help add copyright notices to AMC. The task is simple, but it's big. Fortunately, we can use a script to handle it.</p> <p>The task simply consists of adding the following text to each AMC problem on it:</p> <pre> {{MAA Notice}}</pre> <p>That's it. I've already taken care of 2013 AMC 12B. You can see the changes here and here. You'll see in each case that the message is added to the problem. You load a page and then click "Edit" and add the message.</p> </td></tr> </tbody> </table>	Author	Message	 rruszczyk Administrator  Posts: 11784 Location: Alpine, CA Blog: View Blog	<p>We need community members to help add copyright notices to AMC. The task is simple, but it's big. Fortunately, we can use a script to handle it.</p> <p>The task simply consists of adding the following text to each AMC problem on it:</p> <pre> {{MAA Notice}}</pre> <p>That's it. I've already taken care of 2013 AMC 12B. You can see the changes here and here. You'll see in each case that the message is added to the problem. You load a page and then click "Edit" and add the message.</p>																							
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<h3>USA Computing Olympiad Training Puzzles</h3> <ul style="list-style-type: none"> • These programming challenges are used by the top high school programmers in the country to prepare for international competitions. • I have spent many hours solving these puzzles, and I have used the techniques I have learned in other projects (eg recursion). • I usually solve the puzzles with Python and then translate them to C++ to be submitted to the website. • My code can be found at http://goo.gl/zGZ2aj 	<p>Palindromes are numbers that read the same forwards as backwards. The number 12321 is a typical palindrome.</p> <p>Given a number base B ($2 \leq B \leq 20$ base 10), print all the integers N ($1 \leq N \leq 300$ base 10) such that the square of N is palindromic when expressed in base B; also print the value of that palindromic square. Use the letters 'A', 'B', and so on to represent the digits 10, 11, and so on.</p> <p>Print both the number and its square in base B.</p>																											
<h3>Raspberry Pi Free-Food Webcam</h3> <ul style="list-style-type: none"> • One of my bosses said it would be nice to have a WiFi webcam to check when free food was left on a table in the kitchen on another floor. • On my own initiative and in my spare time, I created a WiFi-enabled webcam with the Raspberry Pi to do this. • Watch me use it! – http://goo.gl/8Ho9aF 	 																											