11/21/14 -

collaborate with	Jump	Search
TWiki		10
Main	TWiki > 🗌 Main Web > Blogs > Conno	orSchneckSBlog
	(2009-07-30, ConnorSchenck)	
Log In	•	Edit Attach
🕥 Main Web	<u>ConnorSchenck</u> - 28 May 2009	
Google Calendar		•
People Blogs	Connor Schenck's Blogs by c	late
Fun Things to Do	30 July 2009	
Logistics & Admin	29 July 2009	
HCI Website	28 July 2009	
	27 July 2009	
Create New Topic		
Index	22 July 2009	
Search	21 July 2009	
 Changes Notifications 	20 July 2009	
 Notifications Statistics 	<u>17 July 2009</u>	
Preferences	<u>16 July 2009</u>	
	15 July 2009	
/ebs	14 July 2009	
Main Sandbox	<u>13 July 2009</u>	
TWiki	10 July 2009	
	9 July 2009	
💡 TWiki Tip of the	8 July 2009	
Day	7 July 2009	
Re-parenting a topic	<u>6 July 2009</u>	
The breadcrumb displayed with a	Seattle Week	
particular TWiki topic is	1 July 2009	
constructed with a	30 June 2009	
topic's Parent . On the	29 June 2009	
Read on 😕		
	<u>26 June 2009</u>	
	25 June 2009	
	24 June 2009	
	23 June 2009	
	22 June 2009	
	<u>19 June 2009</u>	
	<u>18 June 2009</u>	
	<u>16 June 2009</u>	
	<u>15 June 2009</u>	
	12 June 2009	
	10 June 2009	
	9 June 2009	
	8 June 2009	

ConnorSchneckSBlog < Main < TWiki		11/21/14
	5 June 2009	
	3 June 2009	
	2 June 2009	
	1 June 2009	
	<u>29 May 2009</u>	
	<u>28 May 2009</u>	
	Attachments	
	Edit Attach Print version History: r45 < r44 < r43 < r42 < r41 Backlinks Raw View Raw edit More topic actions	
	Topic revision: r45 - 2009-07-30 - 17:58:58 - <u>ConnorSchenck</u>	
Copyright &© by the contributing property of the contributing author		ì





Those results are amazing! Exactly what we were hoping for all along. They show that using both together is better than either one alone. I'm so happy.

2

3

Number of Behaviors Performed on Object

Are poster is finally (hopefully) done. Of course, now that I say that, Professor Stoytchev will show up here in a few minutes and change everything. I'm really tempted to just tell the publications people to go ahead and print it. Ah well, I'll just wait until he shows up.

Our paper is coming along. Ugonna has been working on the related work section, I've been working on methods, and Taylor has been working on the results and conclusions. We should have a rough draft ready by the end of today. Of course, if we have to change our poster again, we won't have one. Oh well, just gotta cross my fingers and hope if all turns out fine.

Add comment

5

4

UgonnaOhiri - 29 Jul 2009 - 23:01

29July2009 < Main < TWiki	LOOK AT THAT GRAPH!	11/21/14
	Edit Attach Print version History: r2 < r1 Backlinks Raw View Raw edit More topic actions	
	Topic revision: r2 - 2009-07-30 - 04:01:03 - <u>UgonnaOhiri</u>	
Copyright &Â [®] by the contributing property of the contributing authors Ideas, requests, problems regardin		



property of the contributing authors. Ideas, requests, problems regarding TWiki? Send feedback 11/21/14

TWiki

📃 Main

🗎 Log In

Main Web
 Google Calendar
 ■ People
 Z Blogs

- Fun Things to DoLogistics & Admin
- HCI Website
- Create New Topic
- Index
 Search
- Changes
- Notifications
- Statistics
- Preferences

Webs

Main
 Sandbox
 TWiki

W TWiki Tip of the Day

Disabling individual WikiWords Prevent a WikiWord from being linked by prefixing it with an exclamation point. Example: To escape SunOs ... Read on Jump

Search

Web > Blogs > ConnorSchneckSBlog > 27July2009 (2009-07-27, ConnorSchenck)

Edit Attach

July 27, 2009

So I haven't blogged for the last couple days. Oops, oh well life moves on.

I spent the weekend working in the lab. I ran the self-organizing map on all the data, then ran the distance measure on all of it. Today I ran some preliminary evaluations, and ahhhhhhhhhh crap. I got object recognition rates so bad, worse than chance in some cases. We may be able to fiddle with some constants to improve it some, but there's not a whole lot we can do. We have to have our results finished by the end of today so we can get our poster printed, so we don't have time to rerun any of the data. Taylor went through all my code this morning and double checked to make sure the poor results weren't some coding error somewhere, and it turns out that it wasn't. I think they are a result of our distance metric. Jivko used string matching in his paper, but to save time (since our data set is much larger and string matching runtime scales quadratically) we used an n-gram trie, which was put together by Matt. We knew that the results would be worse, but they shouldn't be this much worse. Jivko ran some data through the trie as well, and he said he also got poor results, although how bad I'm not sure. He should be in in an hour or so, and so we can ask him to see what he thinks we should do. At the moment, since we don't have time to do any major changes, I think we're just going to have to say that our results show that an n-gram trie is ineffective at object recognition. Since Taylor and I will still be here, next week we may try string matching (we have to use all the REU computers for about 2 days straight, which is why we can't do that now). We'll have to keep in touch with Ugonna through email and Google Docs. Hopefully doing that will give us publishable results.

Another option we might consider is instead of doing object recognition, we may do object classification. A lot of the objects are fairly similar, so classification should give us much better results. We'll have to just hand label the classes for the objects, but that shouldn't be too hard. Whichever we choose, I don't think we're going to get the results that we were looking for, at least not using an n-gram trie. But oh well, hopefully we get some results.



TWiki

Copyright $\&\hat{A}$ [©] by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? <u>Send feedback</u>

22July2009 < Ma colla

constructed with a topic's Parent . On the

... Read on 😕

2July2009 < Main < TWiki			11/21/14
collaborate with	Jump	Search	
		100	
Main	TWiki > 🗌 Main		
a Log In	Web > Blogs > ConnorSchneck (2009-07-22, ConnorSchenck)	SBlog > 22July2009	
Main Web		Edit Attach	
 Google Calendar People Blogs 	July 22, 2009		
 Fun Things to Do Logistics & Admin 	Well, we seem to have made a I	ot of progress since yesterday, or so	
🍳 HCI Website	Taylor tells me. Yesterday I figu It was really noisy, so first I clear	red out how to clean the torque data. red out any outliers, then I ran a	
Create New Topic	running average smooth over it nice. I also took the derivative of	and the data actually looks really the data. I started one of our	
Q Search	•	ning all the torque data; it should	
F+ Changes		oon. We have yet to figure out how to	
Notifications Statistics		a information before and after each	
		nce'). Then we have to train our self-	
	organizing map on the data, whi	hard. After that we're going to run a	
Webs		he data points. Matt (one of the grad	
Main		ght writing us some code to do that	
Sandbox TWiki	, ,	after that is cross-validation with K-	
		our results! I see the end, and it is	
Wiki Tip of the	near. Maybe there is a light at th	-	
Day			
Re-parenting a topic			
The breadcrumb			
displayed with a			Add comment
particular TWiki topic is	1		

Edit | Attach | Print version | History: r1 | Backlinks | Raw View | Raw edit | More topic actions

TWiki

Topic revision: r1 - 2009-07-22 - 18:14:28 - ConnorSchenck

Copyright $\&\hat{A} \ensuremath{\mathbb{C}}$ by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? Send feedback

21

1July2009 < Main < TWiki		11/21/14
collaborate with	Jump Search	
Main	TWiki > Main	
■ Log In	Web > Blogs > ConnorSchneckSBlog > 21July2009 (2009-07-21, ConnorSchenck)	
Main Web	Edit Attach	
 Google Calendar People Blogs 	July 21, 2009	
Fun Things to Do Logistics & Admin	Yesterday after I blogged we were talking with our grad mentors, and	
🍳 HCI Website	they told us some things we needed to change. This meant we weren't able to use all of your computers last night because we had	
 Create New Topic Index Search Changes Notifications Statistics Preferences 	to fix some things. Taylor and I have been working on cropping out irrelevant parts of the audio and proprioceptive data and Ugonna has been working on getting our presentation ready for next Friday. We may try to use your computers on Thursday while we're gone (just let them run all day), if that's okay. I don't think anyone will need to use them.	
Webs Main Sandbox TWiki		Add comment
Wiki Tip of the Day Re-parenting a topic The breadcrumb	Edit Attach Print version History: r1 Backlinks Raw View Raw edit More topic actions Topic revision: r1 - 2009-07-21 - 18:05:08 - ConnorSchenck	
displayed with a particular TWiki topic is constructed with a topic's Parent . On the Read on		

TWiki

Copyright &© by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? <u>Send feedback</u>

11/21/14



TWiki 📃 Main

Main Web Google Calendar People Blogs Fun Things to Do Logistics & Admin

HCI Website
 Create New Topic
 Index
 Search
 Changes
 Notifications
 Statistics
 Preferences

V TWiki Tip of the Day Re-parenting a topic The breadcrumb displayed with a particular TWiki topic

Webs Main Sandbox

⊜ Log In

ŶŸŀſŀŀĨĿŶŴġŶġŦŴġŀŀĹŀŶŊŢġŀŁŹĔĿ&\$&₽%&?ŸġŶIJţźĦŴŀŹŗŴŀŶĸ&\$%ŕ#ŀ@\$ŀ@ġŧŀ@?%ŧ\$^%@\$\@@#*#%&^(^&&#?%%@#%@%THGSRTYSYGYD^W#\$^Y\$Y\$EWY\$W%GTED9W#?



неманемное

Add comment

Next week we'll have to work fast to get all of our data processed and get our results. Hopefully they turn out well.

update: @#\$^@#^&#&^@DFGQW\$#%TWHGSAW\$%TETERYAE%\$YWS%

(That incomprehensible text up there is just Connor saying that the audio capture program has stated throwing an ull pointer exception which means that all the data taken so far today is useless. Nothing changed, and yet there it is, throwing an exception.) update update:

Instead of explaining what happened (as that is too boring) I'm going to tell this harrowing tale that is a metaphor for what happened to lei the harrowing like that a an exception for what happened it tasteme exerter locality, likes in the offects, charge fragment of the resistance with my two battations of men. Just as I was thinking I would wink those doesnot are up to 7 a management are up not column. He had dealty been through some heavy fighting to get to up had be interposed fread is with uppened by Listed that Gener impection in the plants. It said the needed immediate assistance as the was in darger of the opportunity. In dealth the dealth of the said we headed at double time to his aid.

Upon arriving, I noticed that it was a relatively small demon force surrounding General Ugona. After breaking through to him, I inquired as to why he was unable to defeat them with his obviously superior numbers. He said that they were wielding a new veepon: th Null Pointer Exception. This weapon had been utterly decimating his men.

But together, I reasoned, we cruid defeat the. Wave after wave of men charged into the demons, but none prevailed. After many hours spent in vain, we decided that the battle could not be won, and so we referetated to the mountains, letting the demons hold the plains, for now.

In the mountains we consulted the wise sensai Jivko Sinapov. He gave me two green sticks that were arranged to look as if they were two forward skabtes. He said they were called 'comments' and that this would help us defeat the demons. He said that they would not destroy them, but they would contain them.

We returned to the plains, new weapon in hand. A battle ensued. After the dust settled, the demons were defeated; we were VICTORIOUSI But we still had work to do, and even though the battle had been won, the war was far from over.

ZayiraJordan - 20 Jul 2009 - 09:53 Good stuff!! I know how hard is to make those image grids! Good job! (what did u use?)

Bit Mach Bintversion Bistory: r3 < r2 < r1 Biscklinks Baw View Reviedit More topic actions

Topic revision: r3 - 2009-07-20 - 14:53:57 - Zayira.lordar

ors. All material on this collaboration platform is the Copyright &Å© by the contributing authors. All material on this property of the contributing authors. Ideas, requests, problems regarding TWIki? <u>Send feedback</u>

11/21/14



📃 Main

🗎 Log In

🟠 Main Web

- Google Calendar
- People
- Z Blogs
- Fun Things to Do
- Logistics & Admin

🍋 HCI Website

•	Create	New	Торіс

- Index
- Q Search
- F Changes
- Notifications
- Statistics
- 差 Preferences

Webs

Main Sandbox

? TWiki Tip of the Day

Re-parenting a topic The breadcrumb displayed with a particular TWiki topic is constructed with a topic's Parent . On the ... Read on >> TWiki > Main Web > Blogs > ConnorSchneckSBlog > 16July2009 (2009-07-16, ConnorSchenck)

Jump

Edit Attach

Search

July 16, 2009

So I finished my calculations for how to optimize the distribution of calculation tasks given C number of processor cores available and n number of data points. Here are the equations:

$$T(n) = \sum_{x=1}^{n-1} n - x$$

$$G(q) = T(n) / * (q-1) + 1$$

$$S(q) = n - 0.5 - \sqrt{(n-0.5)^2 - 2 * G(q)}$$

There is a typo. There is supposed to be a 'C' between the '/' and the '' in the second equation

So the first equation calculates the total number of comparisons that need to be made. The second, given q (the current core number), calculates what comparison that core should start at. The final one takes that and calculates what data point to start at for that core. I've already written the program that can be run on multiple computers, it just needs to know how many total cores are available, how many data points there are, and what the current core number is.

Edit | Attach | Print version | History: r1 | Backlinks | Raw

View | Raw edit | More topic actions

Topic revision: r1 - 2009-07-16 - 18:26:33 - ConnorSchenck

Copyright & \hat{A} [©] by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? <u>Send feedback</u>



Add comment

TWiki

📃 Main

🗎 Log In

Main Web
 Google Calendar
 People

- Z Blogs
- Fun Things to DoLogistics & Admin
- HCI Website
- Create New Topic
- Index
- Q Search
- 🕞 Changes
- Notifications
- Preferences
- FIEIEIEIICE

Webs

Main Sandbox

Wiki Tip of the Day

Server side include To include the contents of a web page or TWiki topic, use % nop INCLUDE{"page"}% . Examples: ... Read on TWiki > Main Web > Blogs > ConnorSchneckSBlog > 15July2009 (2009-07-15, BellaManoim)

Jump

Edit Attach

Search

July 15, 2009

We are now 3/5 of the way to being complete with our data collection. Although it seems as if it is taking longer and longer to take data. For some reason, some random part of the trial process will fail and force us to redo that trial. This is starting to happen about 50% of the time, which means our data collection is twice what it should be. I talked to Shane, and he said that the issue was somewhere deep in Barrett's (the manufacturer of our robotic arm) code, so there's really nothing we can do about it short of rewriting all of it. Oh well, we should be able to finish by the end of the week.

I've finished string matching for the moment, and now I'm working on finding a function that, given *n* number of data points and *c* processor cores, how to distribute the comparisons over the cores so they do the same amount of work. We have to build a lookup up table of similarity between all of our data points. We have about 2500 data points in each of our modes of perception (audio and proprioceptive). It takes about 5 seconds to run one comparison, and we'll need to run 2500^2 comparisons, so you can do the math of how long that will take on one core. So we're going to need to parallelize this process. If anyone reading this wouldn't mind, we may need to use your computer in the VRAC for an overnight to run these calculations, if that would be okay. Hopefully this works.

Add comment

BellaManoim - 15 Jul 2009 - 15:47

that sounds like a whole lot of busy computers

Edit | Attach | Print version | History: r2 < r1 | Backlinks | Raw View | Raw edit | More topic actions

Topic revision: r2 - 2009-07-15 - 20:47:39 - BellaManoim

Copyright & \hat{A} [©] by the contributing authors. All material on this collaboration platform is the property of the contributing authors.	TWiki
Ideas, requests, problems regarding TWiki? Send feedback	





11/21/14





TWiki

Ideas, requests, problems regarding TWiki? Send feedback

property of the contributing authors.







https://www.hci.jastate.edu	/REU09/bin/view/Main/6July2009

property of the contributing authors.

📃 Main

🗎 Log In

🏠 Main Web

People
Blogs

4

Index

Q

Webs

Main

TWiki

Day

Google Calendar

Fun Things to Do

Create New Topic

Logistics & Admin

🍋 HCI Website

Search

F Changes

Notifications

Preferences

Sandbox

💡 TWiki Tip of the

One can attach files to

any topic. The action of

attaching ... Read on 😕

attaching a file to a

topic is similar to

File attachments

collaborate with

TWiki >
Main Web > Blogs > ConnorSchneckSBlog > 1July2009
(2009-07-06, HamadiMcIntosh)

Search

Jump



TWiki

July 1, 2009

This is pretty cool. We are currently sitting in the Las Vegas airport, otherwise known as <u>McCarran</u> International Airport, waiting for our flight which takes off at 1 am, or for about another couple hours. Normally that would suck, having to just chill here for a couple hours, but unlike most other airports, <u>McCarran</u> has **free** wireless internet and actually has power outlets. I hope the Memphis airport does as well. You can tell we're in Vegas because there are slot machines all over the airport, but they all say no people under 21 allowed :(. Ah well, we saw the strip on the flight in and it was pretty cool.

As far as the conference goes, today was a fairly uneventful day. We listened to a couple talks this morning that I thought were somewhat interesting (they were about coordinating multiple robots to do stuff) but weren't really relevant to what we want to do. The talks in the afternoon didn't really pertain to our research area so we skipped them and instead hung around on University of Washington's campus. I have to say, it is a very beautiful campus and the temperature in Seattle this time of year is about right.

The conference as a whole was somewhat interesting, but I think we didn't really come away from it with a better idea about how to do our project like we would have liked. Ah well, at least it gave us some insight as to what else is going on in robotics. Oh, and by the way, if Steve, Pam, Mike, or Zayira is reading this, we most likely will get back to Ames in the early afternoon tomorrow, but I do not suspect that we will make it in to the lab as we probably won't get much sleep on our flights and will be very tired.

Add comment

HamadiMcIntosh - 06 Jul 2009 - 13:05

I've spent a lot of time in airports. I've had to stay overnight in airports as well. That's really not fun.

Topic revision: r2 - 2009-07-06 - 18:05:04 - HamadiMcIntosh

Copyright &© by the contributing authors. All material on this collaboration platform is the property of the contributing authors. Ideas, requests, problems regarding TWiki? <u>Send feedback</u>