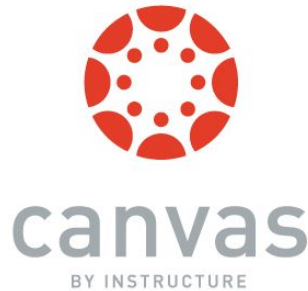


From Homebuilt LMS to Canvas: Lessons from the Developer Trenches

AND

Carrots and Sticks: Transitioning Faculty to a new LMS



A campfire is burning brightly in the foreground, built on a beach. The fire is contained within a circle of dark, smooth stones. The background shows a calm sea with several large, dark rock formations (sea stacks) rising from the water. The sky is a pale, overcast blue, suggesting dusk or dawn. The overall mood is serene and contemplative.

From Homebuilt to Canvas: Lessons from the Developer Trenches

UCI Office of Information Technology

Who are we?



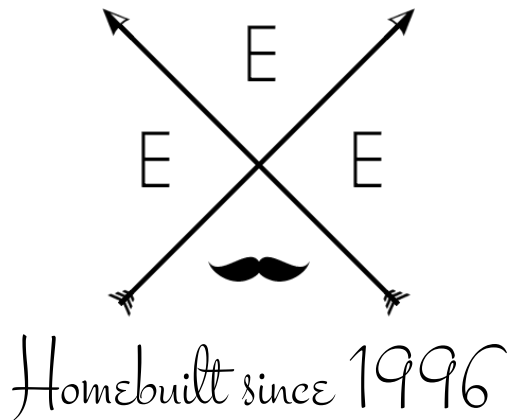
Brian Payne
Application Developer



Su Wang
Enterprise Software Engineer

*Ray, our designer,
who helped make this
presentation not ugly*





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The EEE Toolbox ?

EEE is UCI's course management system and your gateway to a variety of instructional technology tools.

Assessment Tools	Communication	Collaboration	Class Administration
Quiz	WebsiteManager	DropBox	GradeBook
Survey	Announcements	MessageBoard	Rosters
Evaluations	ClassMail Manager	Chat	Assistants
EaterEvals	Replay Publisher		SignupSheet

Instructional Spotlights ?



Undergraduates — Submit your feedback before June 30

UCI Undergraduates are invited to participate in the University of California Undergraduate Experience Survey (UCUES) before June 30, 2016.

UCUES asks about your experiences at UCI and the results help improve campus programs. UCI is giving away over \$3,000 in prizes. Fifteen lucky winners will be randomly selected each week to receive their choice of a Starbucks or In-N-Out Burger gift card. Upon the close of the survey, we will have drawings for six Grand Prizes (one \$500 and five \$100 Amazon gift cards).

To participate, watch for the official email or visit <http://assessment.uci.edu/UCUES/>.

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Who are you?

Today we'll cover

Lessons in SIS Integration

Lessons in Branding and Customization





Lessons in SIS Integration

Lessons in SIS Integration

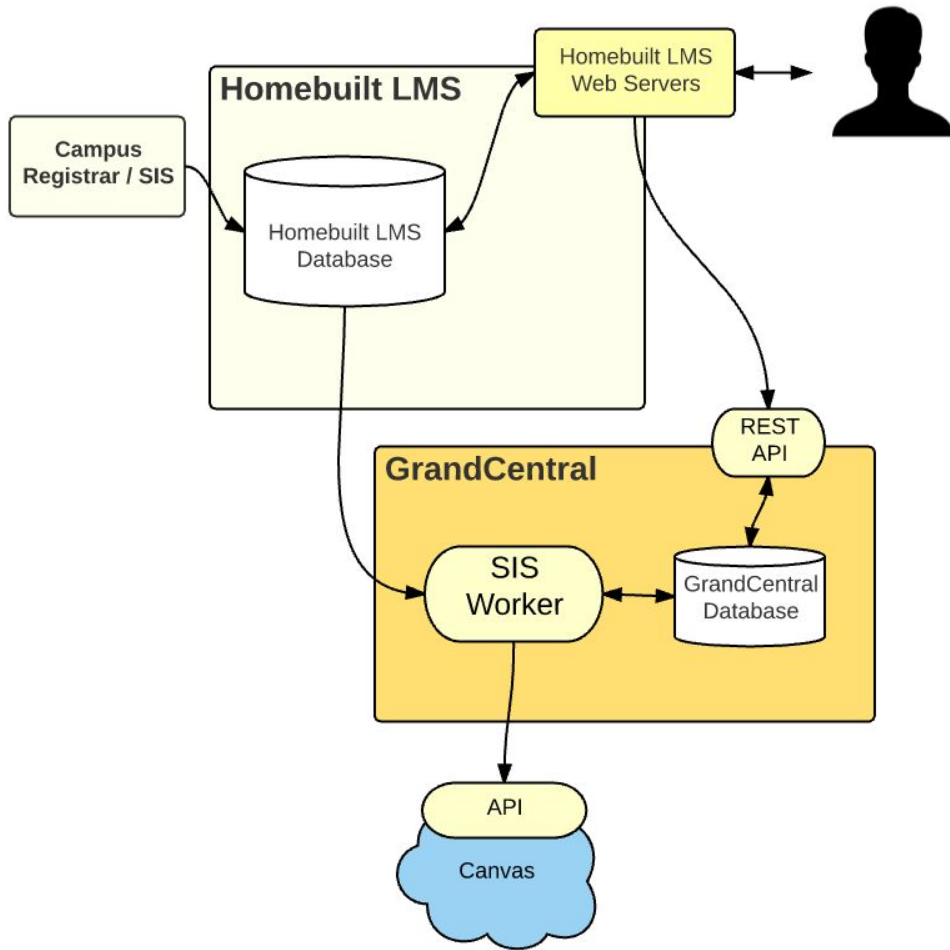
- Background
 - Non-vendor, very old campus SIS that is not able to directly integrate with Canvas
 - Homebuilt LMS had access to this information in priority format
- Problem
 - Had to build our own integration to send information into Canvas
- Constraints
 - In beginning, only had data from homebuilt LMS to start with
 - Data format in homebuilt LMS very different

Field Name	Data Type	
user_id	text	Required field. A unique identifier used to reference users in the enrollments table. This field is called the SIS ID.
integration_id	text	A secondary unique identifier useful for more complex SIS integrations. This identifier is optional.
login_id	text	Required field. The name that a user will use to login to Instructure. If you have an existing user in Canvas, this field is optional.
password	text	If the account is configured to use LDAP or an SSO protocol then this should not be used. If the user already has a password (from a previous SIS import or otherwise) it will not be used. Setting the password will in most cases log the user out of Canvas. If the user has a password, this would happen if your institution transitioned from using Canvas authentication to a different protocol.
ssha_password	text	Instead of a plain-text password, you can pass a pre-hashed password using the SHA-1 algorithm. You should still encourage users to change their password after logging in for the first time.
authentication_provider_id	text or integer	The authentication provider this login is associated with. Logins associated with a search for logins associated with them, or unassociated logins. New providers will be created if the type of the provider (in which case, it will find the first matching provider).
first_name	text	Given name of the user.
last_name	text	Last name of the user.
full_name	text	Full name of the user. Omit first_name and last_name if this is provided.
sortable_name	text	Sortable name of the user. This is normally inferred from the user's name, but you can override it.
short_name	text	Display name of the user. This is normally inferred from the user's name, but you can override it.
email	text	The email address of the user. This might be the same as login_id, but should still be unique.
status	enum	Required field. active, deleted

Lesson 1

Start with what you have





Starting with what we had

- Middle man for sending data to Canvas and communicates with homebuilt LMS
- Canvas doesn't need to know Homebuilt LMS exists
- If the homebuilt LMS goes away, we can plug GrandCentral to another data source

Lesson 2

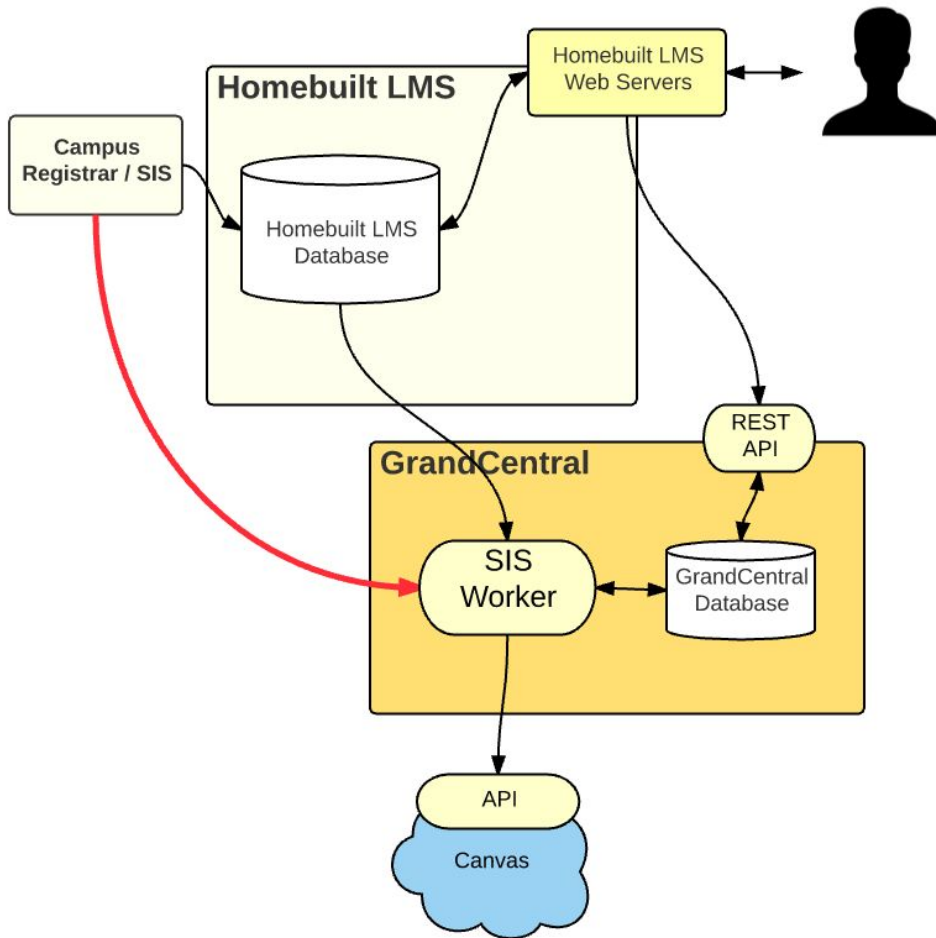
Make small

Improvements

along the

way





Making small improvements

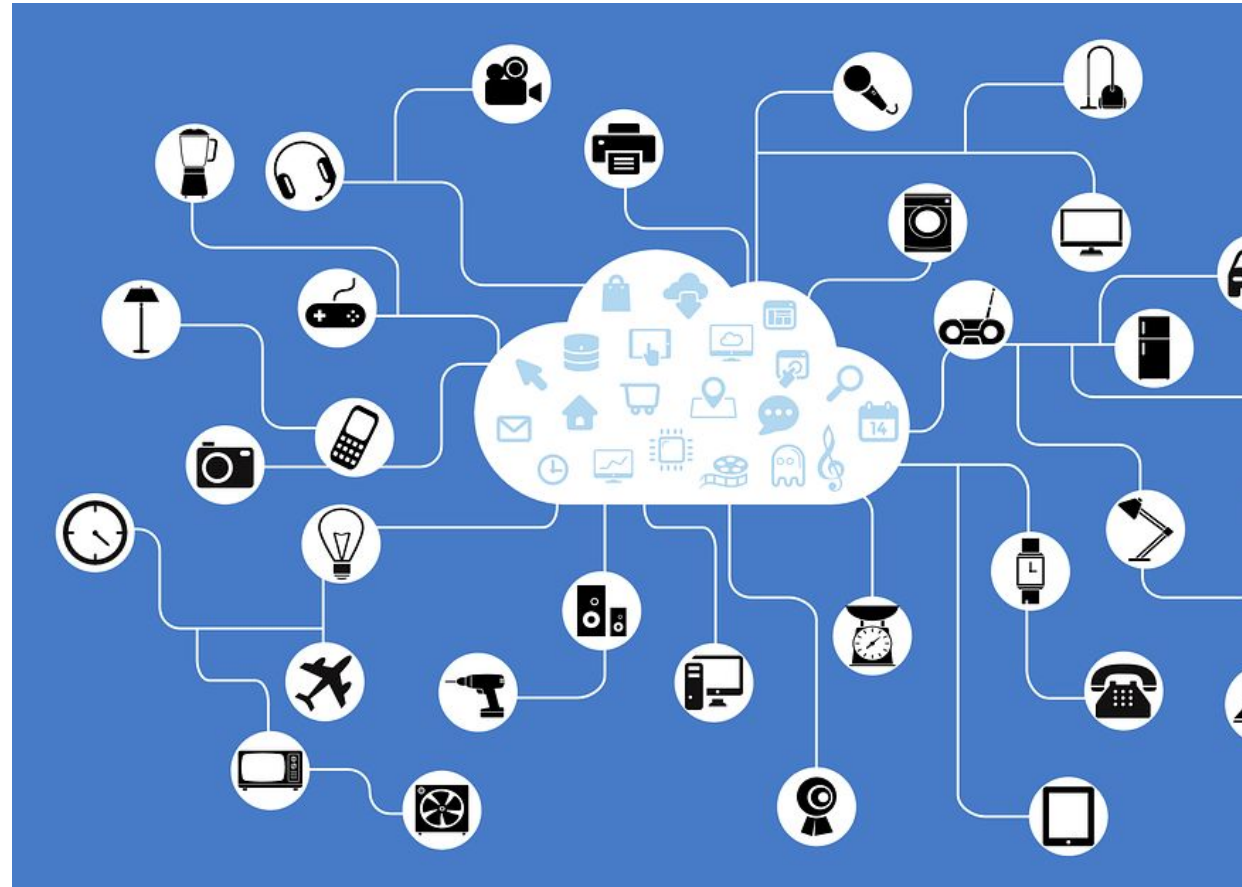
Grand Central gets an upgrade!

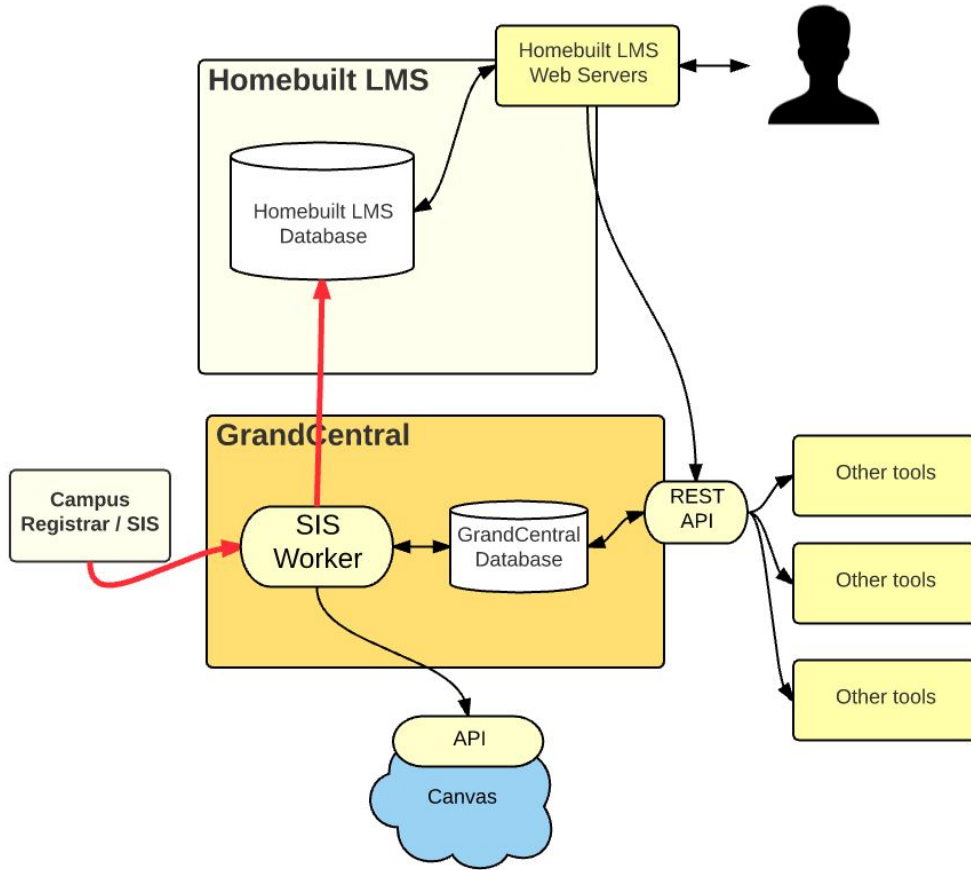
- Most SIS data now coming directly from SIS
- Some data still dependent on homebuilt LMS database
 - Such as Teaching Assistants to Course bindings



LESSON #3

Prepare for change





Things change... be prepared

- All SIS data now coming straight to GrandCentral
- Data is now fed into the homebuilt LMS as needed
- Reduces dependencies

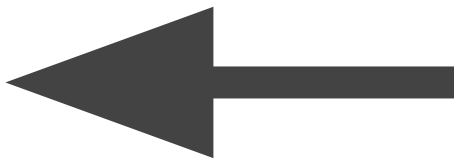
Lessons Learned

Start with what you have

Make small improvements along the way

Prepare for change





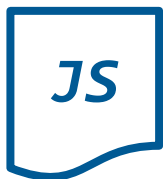
Branding and Customization

Customization

- We needed to add buttons
 - Transfer to WebGrades
- Customize content
 - Help dialog pop-up
 - Custom footer



Theme Manager




The image shows a screenshot of the Canvas LMS Theme Manager interface. On the left, there are two blue icons labeled 'JS' and 'CSS'. The main interface is divided into several sections:

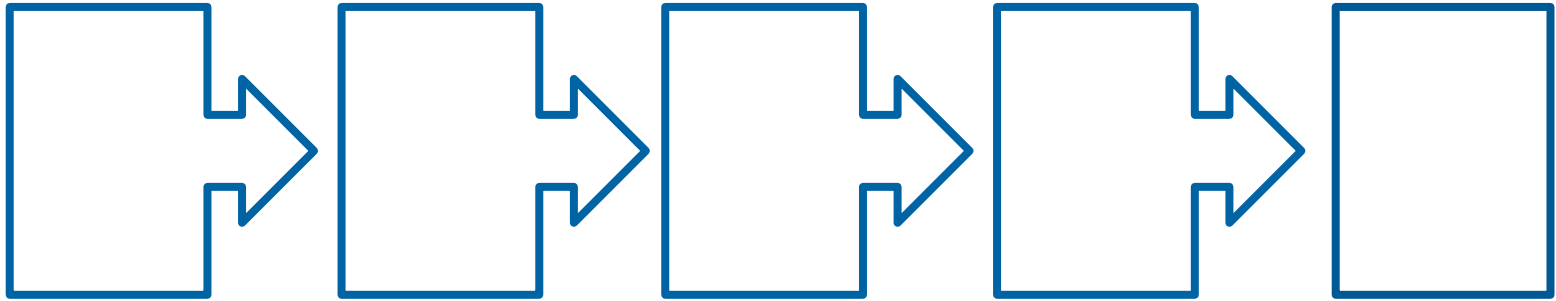
- Left Sidebar:** A vertical navigation menu with icons for Account, Dashboard, Courses, Calendar, Inbox, Commons, and Help.
- Top Bar:** The 'EEE Canvas' logo, a user profile icon, and a 'Dashboard' title.
- Main Content Area:** A grid of six course cards, each with a colored header and a title. The cards are:
 - Canvas Discovery Support Traini... (Fall 2015)
 - Experiment with Physics Quiz Ex... (Fall 2015)
 - PHYSICS QUIZ (Fall 2015)
 - New Faculty Teaching Academy ... (Fall 2015)
 - Quiz QTI Samples QUIZ
- Right Sidebar:** A 'To Do' section with two items: 'Grade Group assignment' and 'Grade Quiz lifecycle'. Below it are sections for 'Coming Up', 'Recent Feedback', and 'Nothing for the next week'.

Horror

```
211  
212     $("section#outer #prodConfig #BaseProdAmount").parent().parent().hide().prev().hide().next().next().hide().next().find("td").attr("align", "left")  
213     .find("input[type='image']").attr("src", "/includes/images/ordersteps/prodconfigBuyBtn.jpg").next().hide().next().hide();
```



Follow a development process



Structured

3 Files:

`<feature>.css`

`<feature>.js`

`<feature>.html`



The screenshot shows a web browser window with the address bar containing the URL `https://canvas.eee.uci.edu/courses/620/gradebook`, which is highlighted with a red box. The page title is "Gradebook - Canvas Discovery Support Training > Grades". On the left is a blue sidebar with the "EEE Canvas" logo and navigation links for "Account", "Admin", and "Dashboard". The main content area includes a filter input field, a "Transfer to WebGrades" button (highlighted with a red box), and an "Import" button. Below these are "Export" and "Settings" icons. A table displays student data with columns for "Student Name", "Secondary ID", "No late", "Peer review assignment", "Another assignment", "Send me a word doc", and "Group assignr".

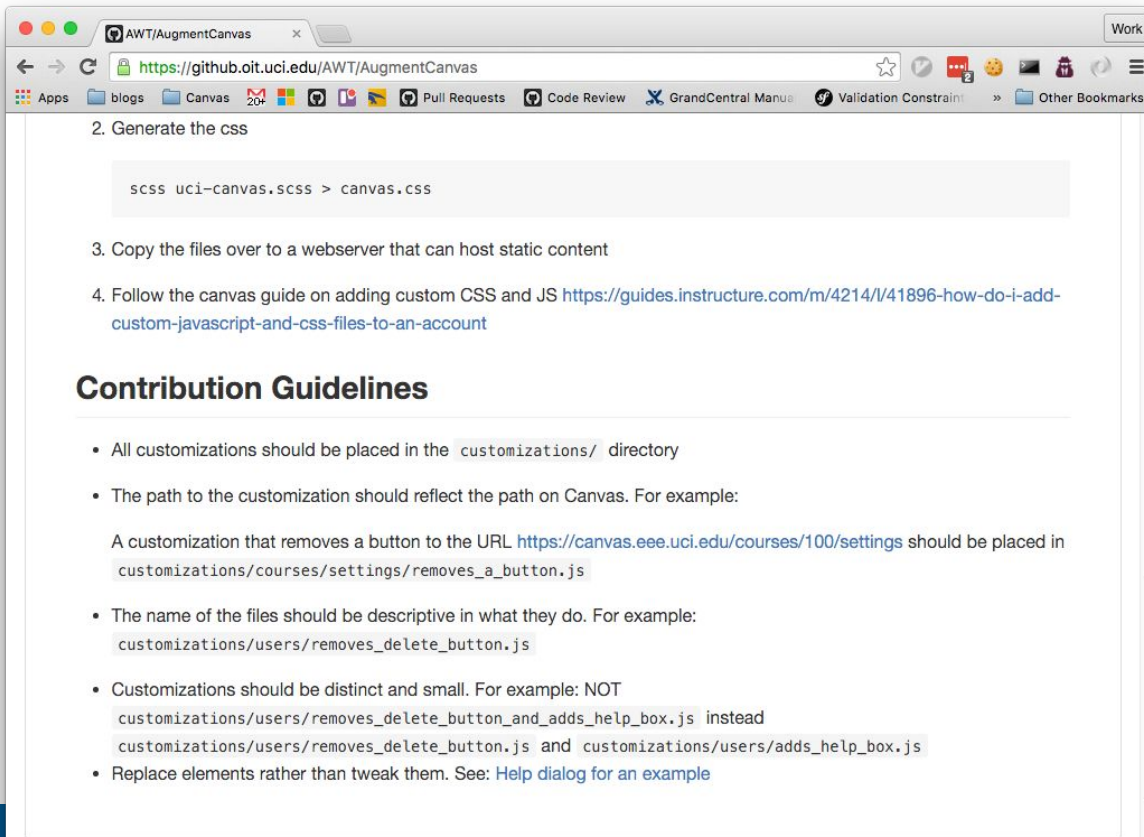
Student Name	Secondary ID	No late Out of 35	Peer review assignment Out of 35	Another assignment Out of 50	Send me a word doc Out of 35	Group assignr Out of 35
Mary The Antearer	maryant	-	-	3	-	-
Jane Doe	gdoe2	-	-	2	-	-

customizations/courses/gradebook/

add_transfer_to_webgrades_buttons.js



Guidelines



A screenshot of a web browser window showing a GitHub page. The browser's address bar displays `https://github.oit.uci.edu/AWT/AugmentCanvas`. The page content includes a numbered list of steps for generating CSS and copying files to a webserver. Below this, there is a section titled "Contribution Guidelines" with a bulleted list of rules for file naming and placement. A code block shows the command `scss uci-canvas.scss > canvas.css`. The browser's toolbar and bookmarks are visible at the top.

2. Generate the css

```
scss uci-canvas.scss > canvas.css
```

3. Copy the files over to a webserver that can host static content

4. Follow the canvas guide on adding custom CSS and JS <https://guides.instructure.com/m/4214/l/41896-how-do-i-add-custom-javascript-and-css-files-to-an-account>

Contribution Guidelines

- All customizations should be placed in the `customizations/` directory
- The path to the customization should reflect the path on Canvas. For example:

A customization that removes a button to the URL <https://canvas.eee.uci.edu/courses/100/settings> should be placed in `customizations/courses/settings/removes_a_button.js`
- The name of the files should be descriptive in what they do. For example:
`customizations/users/removes_delete_button.js`
- Customizations should be distinct and small. For example: NOT `customizations/users/removes_delete_button_and_adds_help_box.js` instead `customizations/users/removes_delete_button.js` and `customizations/users/adds_help_box.js`
- Replace elements rather than tweak them. See: [Help dialog for an example](#)

- Development process
- Structure your code
 - 3 files
 - Directories match URL
- Guidelines
 - Single responsibility per fileset
 - Replace not tweak



Now for UC Merced!

Slides: <https://speakerdeck.com/suw> (to be published after this presentation)

Contact us if you have more questions!

Brian: bpayne@uci.edu

Su: suw@uci.edu

UCI Office of Information Technology