

SOP: CEA Budget Dashboard

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Github: <https://github.com/ceaur/cea-budget-dashboard>
Streamlit: <https://cea-budget.streamlit.app/>

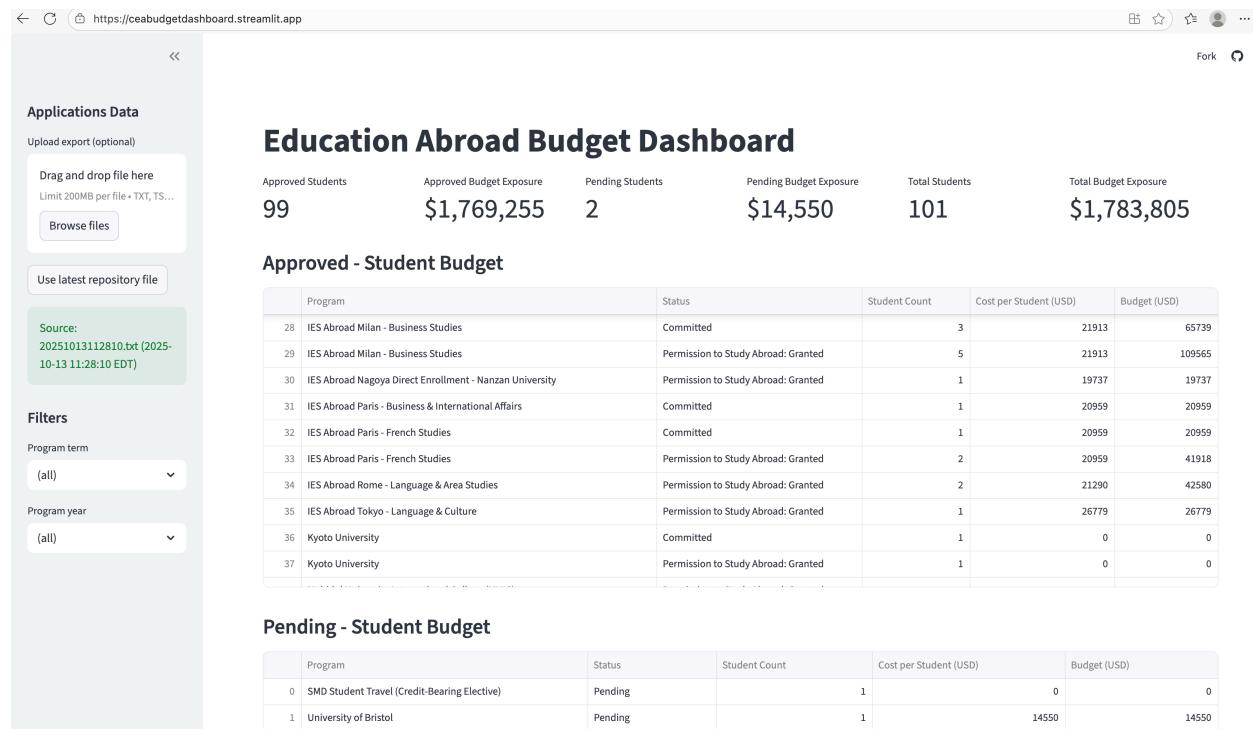
Table of Contents

Purpose	3
Scope	3
User Roles:	4
Workflow:	4
Steps to Upload Data.....	6
Understanding the Dashboard Layout	12
Maintenance:.....	12
Data Input Requirements.....	13
Application Logic Overview.....	13
File Detection Logic	13
Cost Mapping Logic	14
Deduplication & Priority Logic	15
Budget Calculation Logic	15
Display & Export Logic	15

Purpose

This SOP outlines the steps to manage, update, and operate the *Education Abroad Budget Dashboard*, which visualizes study abroad program data (applications, statuses, and program costs) to support budgeting and decision-making.

It replaces manual spreadsheets with an automated live dashboard that calculates total students, costs, and approved program budgets - all in one place.



The screenshot shows the 'Education Abroad Budget Dashboard' Streamlit application. On the left, there's a sidebar titled 'Applications Data' with sections for 'Upload export (optional)', 'Source' (listing a file path), and 'Filters' for 'Program term' and 'Program year'. The main area has a title 'Education Abroad Budget Dashboard' and summary statistics: Approved Students (99), Approved Budget Exposure (\$1,769,255), Pending Students (2), Pending Budget Exposure (\$14,550), Total Students (101), and Total Budget Exposure (\$1,783,805). Below this are two tables: 'Approved - Student Budget' and 'Pending - Student Budget', each showing a list of programs with their status, student count, cost per student, and budget.

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
IES Abroad Milan - Business Studies	Committed	3	21913	65739
IES Abroad Milan - Business Studies	Permission to Study Abroad: Granted	5	21913	109565
IES Abroad Nagoya Direct Enrollment - Nanzan University	Permission to Study Abroad: Granted	1	19737	19737
IES Abroad Paris - Business & International Affairs	Committed	1	20959	20959
IES Abroad Paris - French Studies	Committed	1	20959	20959
IES Abroad Paris - French Studies	Permission to Study Abroad: Granted	2	20959	41918
IES Abroad Rome - Language & Area Studies	Permission to Study Abroad: Granted	2	21290	42580
IES Abroad Tokyo - Language & Culture	Permission to Study Abroad: Granted	1	26779	26779
Kyoto University	Committed	1	0	0
Kyoto University	Permission to Study Abroad: Granted	1	0	0

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
SMD Student Travel (Credit-Bearing Elective)	Pending	1	0	0
University of Bristol	Pending	1	14550	14550

Scope

Applies to:

- Study Abroad Office staff and data analysts maintaining the dashboard.
- Authorized users accessing the Streamlit web app for reports, exports, and KPIs.

User Roles:

Role	Purpose
Education Abroad Staff	Upload data and view summaries
Finance / Budget Team	Review total cost exposure
Data Analyst / Developer	Maintain the app and troubleshoot issues

Workflow:

1. Data Inputs

1. The dashboard uses **two data files**:
 - a) **Applications File (.txt)** - exported from Terra Dotta by clicking the Text export option as shown below:

The screenshot shows a web browser window for the University of Rochester's Center for Education Abroad. The URL is studyabroad.rochester.edu/index.cfm?FuseAction=Administration.SavedSearch&Search_ID=107252. The page title is "Administration : Budget_Spring2026_Students". A message box says "Following are the results of your saved search." Below it, a blue box displays "Results for saved query "Budget_Spring2026_Students"" and a note about searching for applicants with Outgoing programs for Spring 2026. A "Show full search verbiage" link is present. At the bottom, there are tabs for "Overview", "Options", "Progress Audit", "Map Results", and "Group by". A table lists application details:

	Status	Program	Term
IES Abroad Barcelona - Engineering	Granted	IES Abroad Barcelona - Engineering (ID 46849; PP 8-26-25 - not ranked)	Spring, 2026
IES Abroad Madrid - Engineering, Math & Science	Granted	IES Abroad Madrid - Engineering, Math & Science (ID 47993 - not ranked)	Spring, 2026
IES Abroad Barcelona - Engineering	Granted	IES Abroad Barcelona - Engineering (ID 46892 - not ranked)	Spring, 2026
DIS - Study Abroad in Stockholm, Sweden	Not ranked	DIS - Study Abroad in Stockholm, Sweden (ID 48172 - not ranked)	Spring, 2026
Non-UR Study Abroad Program	Not ranked	Non-UR Study Abroad Program (ID 47925 - see comments - ranked 1)	Spring, 2026
CIEE Central European Studies Program in Prague, Czech Republic	Not ranked	CIEE Central European Studies Program in Prague, Czech Republic (ID 46845; HSA 9-30-25 - not ranked)	Spring, 2026
IES Abroad Madrid - Engineering, Math & Science	Not ranked	IES Abroad Madrid - Engineering, Math & Science (ID 46538 - not ranked)	Spring, 2026
DIS - Study Abroad in Stockholm, Sweden	Not ranked	DIS - Study Abroad in Stockholm, Sweden (ID 47981 - speaking with professor for 3 more courses - not ranked)	Spring, 2026
CIS Abroad Semester in Barcelona - Universitat Autonoma de Barcelona	Not ranked	CIS Abroad Semester in Barcelona - Universitat Autonoma de Barcelona (ID 46676 - need to do HSA - not ranked)	Spring, 2026
Baumann, Maya Eloisa	Committed		

- b) **ProgramCost File (.csv)** - contains cost per student per program as shown in below file (steps to manage this data is in the later section):

The screenshot shows a GitHub repository named "study-abroad-budget-dashboard". The "Code" tab is selected. In the "data" folder, there is a file named "ProgramCost.csv". A commit by "shanalishah" is visible, updating the file "ProgramCost.csv" two weeks ago. The commit message is "Update ProgramCost.csv". The file content is a CSV table with columns: #, Program Name, and \$ Cost/Student. The table lists various study abroad programs and their respective costs.

#	Program Name	\$ Cost/Student
2	3rd Party Programs	
3	Advanced Studies in England	\$22,800.00
4	CIEE Central European Studies Program in Prague, Czech Republic	\$19,950.00
5	CIEE Middle East Studies in Amman, Jordan	\$17,950.00
6	CIS Abroad Semester in Barcelona - Universitat Autonoma de Barcelona	\$17,590.00
7	College Year in Athens - Semester and Academic Year Program	\$26,500.00
8	DIS - Study Abroad in Copenhagen, Denmark	\$29,950.00
9	DIS - Study Abroad in Stockholm, Sweden	\$29,950.00
10	IES Abroad Amsterdam - Psychology & Sciences	\$23,950.00
11	IES Abroad Amsterdam - Social Sciences & Humanities	\$23,950.00
12	IES Abroad Barcelona - Liberal Arts & Business	\$20,995.00
13	IES Abroad Barcelona - Engineering	\$20,137.00
14	IES Abroad Dublin Direct Enrollment - Trinity College	\$20,521.00
15	IES Abroad European Union	\$24,918.00
16	IES Abroad London - Health Practice & Policy	\$24,636.00
17	IES Abroad London - Social Sciences & Sustainability	\$22,432.00
18	IES Abroad London - Study London	\$22,432.00
19	IES Abroad London Direct Enrollment - University College London	\$25,990.00

2. Automatic Detection

1. The app automatically finds the **newest applications file** in the data folder.
2. Files must be named using a **date-time code** (so the app knows which is newest):
 - a) Example - 20251013112810.txt means *2025-10-13 at 11:28:10*.

3. Calculations

1. The dashboard groups students by **Program** and **Status** (e.g., Committed, Granted, Pending).
2. It multiplies the **student count × program cost** to show the **total budget exposure**.

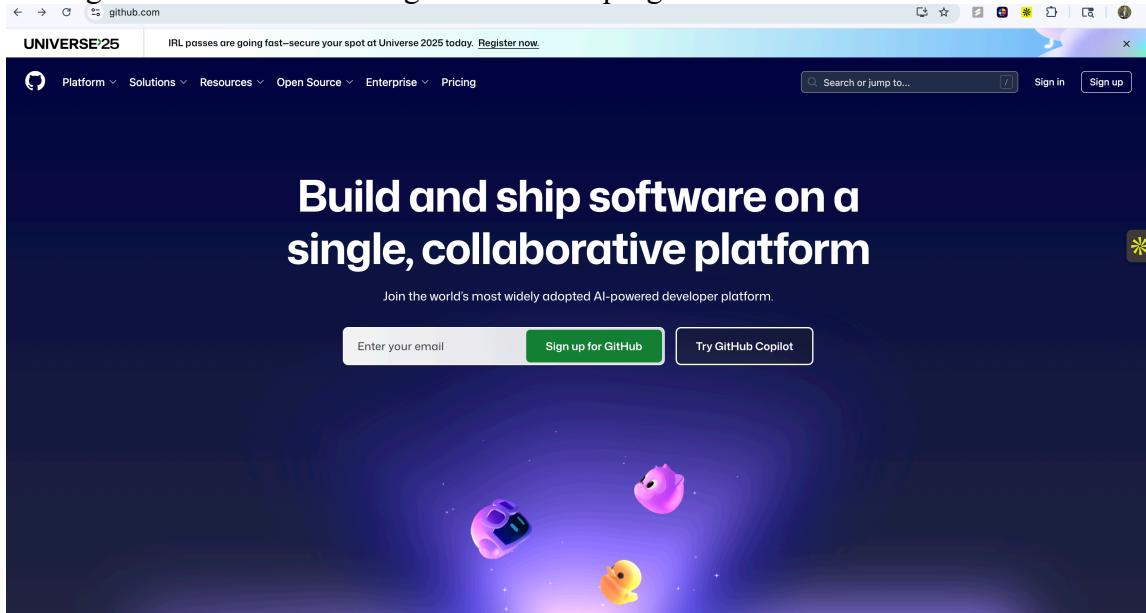
4. Outputs

1. Summary metrics at the top (Approved Students, Pending Students, Budgets).
2. Program-wise tables.
3. Download options for Word, PDF, or Excel reports.

Steps to Upload Data

For Administrators - Upload via GitHub

1. Go to github.com and click “Sign in” on the top right:



2. Enter the credentials of CEA account:

A screenshot of the GitHub sign-in page. At the top, it says 'Sign in to GitHub'. Below that is a 'Username or email address' input field containing 'ceadvisors@ur.rochester.edu'. To the right of the input field is a 'Forgot password?' link. Below the input field is a 'Password' input field with several dots in it. To the right of the password field is another 'Forgot password?' link. Below the password field is a large green 'Sign in' button. Below the sign-in form is a horizontal line with the word 'or' in the center. Underneath the 'or' are three alternative sign-in buttons: 'Continue with passkey' (with a key icon), 'Continue with Google' (with a Google 'G' icon), and 'Continue with Apple' (with an Apple logo icon). At the very bottom of the page, there is a small note 'New to GitHub? [Create an account](#)'.

3. Once login is successful, click on the right-most profile logo to open options:

The screenshot shows the GitHub dashboard with a modal window titled "Join GitHub Education!". The modal features a heading "Free and discounted services for teachers and students.", a list of three services: Copilot, Heroku, and Microsoft Azure, and a "Join GitHub Education" button. The GitHub interface includes a search bar, a dashboard menu, and various repository cards.

4. From the options, select “Repositories”:

The screenshot shows the GitHub user profile dropdown menu. The "Repositories" option is highlighted. Other options visible include Profile, Stars, Gists, Organizations, Enterprises, Sponsors, Settings, Copilot settings, Feature preview (New), Appearance, Accessibility, Try Enterprise (Free), and Sign out.

5. Select the repository “cea-budget-dashboard”:

The screenshot shows the GitHub repository page for 'cea-budget-dashboard'. The repository is public and was last updated last week. It is associated with the 'Python' language. The repository owner is 'ceaur', which is the Center for Education Abroad. The profile picture is a shield with the word 'MELIORA' at the top and symbols representing education and music below. The repository has 1 branch and 0 tags. There are 6 commits in the main branch. The most recent commit is 'Delete data/wd' by 'ceaur' on 'a3f318c' last week. The repository has 0 stars, 0 forks, and 0 releases. The README section is currently empty, with a button to 'Add a README'.

6. This is take us to our project folder for the budget dashboard tool, we can click on data folder to access our project data files:

The screenshot shows the GitHub repository page for 'cea-budget-dashboard' under the 'Code' tab. The repository has 1 branch and 0 tags. The main branch contains three files: 'data', 'cea_budget_app.py', and 'requirements.txt'. The 'data' file was deleted on 'a3f318c' last week. The 'cea_budget_app.py' file was created on 'a3f318c' last week. The 'requirements.txt' file was added via upload on 'a3f318c' last week. The repository has 0 stars, 0 forks, and 0 releases. The README section is currently empty, with a button to 'Add a README'.

- Once we are in the data folder, we can see our 2 files, “ProgramCost.csv” and the student data file extracted from Terra Dotta.

The screenshot shows a GitHub repository interface. The left sidebar shows a tree view with 'main' selected, and a 'data' folder expanded, containing '20251013112810.txt', 'ProgramCost.csv', 'cea_budget_app.py', and 'requirements.txt'. The right pane shows the contents of the 'data' folder. There is a header bar with various GitHub navigation links. Below the header is a search bar and a toolbar with icons for add, commit, and other repository actions. The main content area displays the file list with columns for 'Name', 'Last commit message', and 'Last commit date'. The '20251013112810.txt' file has a yellow star icon next to it, indicating it was added via upload.

- If we want to update the data, we can click “Add file” → “Upload files”. Upload the new Terra Dotta export (must be .txt). Name should be like this: “20251013112810.txt” (*That number represents the date/time*)

The screenshot shows the same GitHub repository interface as before, but now with a context menu open over the '20251013112810.txt' file in the 'data' folder. The menu includes options like 'Create new file' and 'Upload files'. The rest of the repository view is identical to the previous screenshot.

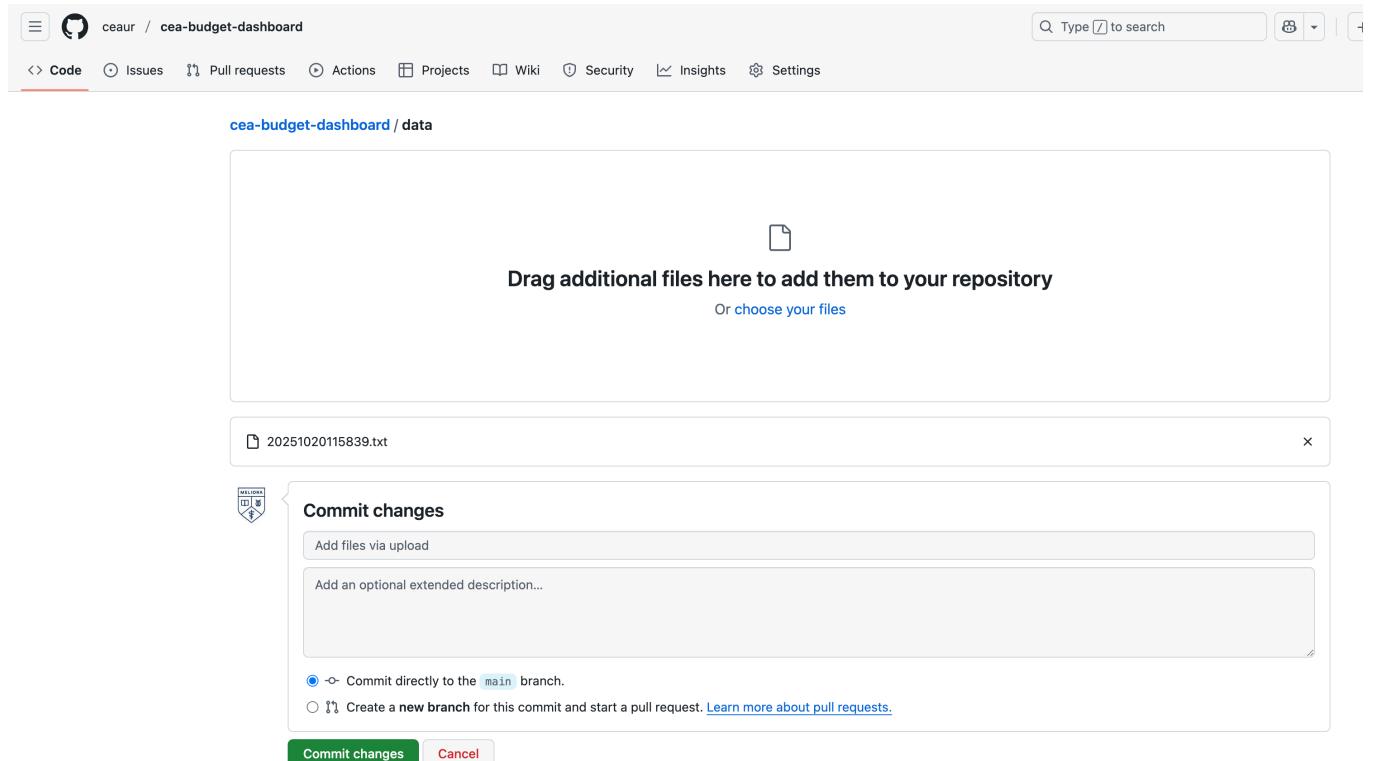
- We can click “Choose your files”

The screenshot shows a 'Commit changes' dialog box. At the top, there's a large text area with a file icon and the placeholder 'Drag files here to add them to your repository' followed by 'Or choose your files'. Below this is a smaller input field for 'Add files via upload'. Underneath are fields for 'Add an optional extended description...' and 'No file chosen'. At the bottom, there are two radio button options: one for committing directly to the 'main' branch and another for creating a new branch. There are also links for 'Learn more about pull requests.' and 'Commit changes' and 'Cancel' buttons.

- Select the file that we want to upload:

The screenshot shows a file upload confirmation dialog. It displays a file named '20251020115839.txt' with a file type of 'Plain Text'. Below the file name are three timestamped entries: 'Oct 20, 2025 at 11:58 AM', '53 KB', and 'Oct 20, 2025 at 11:58 AM'.

11. Select “Commit changes”:



12. Once you upload, the dashboard will automatically detect the newest file the next time you refresh it. (latest will be taken by the app and shown on the left in green):

The screenshot shows a Streamlit application titled 'Education Abroad Budget Dashboard'. On the left, there's a sidebar with sections for 'Applications Data' (with a 'Browse files' button), 'Source' (listing '20251020115839.txt (2025-10-20 11:58:39 EDT)'), and 'Filters' (with dropdowns for 'Program term' and 'Program year'). The main area has a title 'Education Abroad Budget Dashboard' and several summary statistics: Approved Students (100), Approved Budget Exposure (\$1,766,500), Pending Students (2), Pending Budget Exposure (\$14,550), Total Students (102), and Total Budget Exposure (\$1,781,050). Below these are two tables. The first table, 'Approved - Student Budget', lists 10 programs with their status, student count, cost per student, and total budget. The second table, 'Pending - Student Budget', lists 2 programs with their status, student count, cost per student, and total budget. The 'Approved - Student Budget' table has a yellow star icon in the top right corner.

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
0 Advanced Studies in England	Committed	1	22800	22800
1 Advanced Studies in England	Permission to Study Abroad: Granted	2	22800	45600
2 CIEE Central European Studies Program in Prague, Czech Republic	Permission to Study Abroad: Granted	1	19950	19950
3 CIEE Middle East Studies in Amman, Jordan	Permission to Study Abroad: Granted	1	17950	17950
4 CIS Abroad Semester in Barcelona - Universitat Autònoma de Barcelona	Committed	7	17590	122130
5 CIS Abroad Semester in Barcelona - Universitat Autònoma de Barcelona	Permission to Study Abroad: Granted	1	17590	17590
6 Chinese University of Hong Kong	Committed	3	0	0
7 City St. George's University of London	Committed	1	13375	13375
8 DIS - Study Abroad in Copenhagen, Denmark	Committed	3	29950	89850
9 DIS - Study Abroad in Copenhagen, Denmark	Permission to Study Abroad: Granted	4	29950	119800

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
0 SMD Student Travel (Credit-Bearing Elective)	Pending	1	0	0
1 University of Bristol	Pending	1	14550	14550

For Non-Admin Users - Upload Directly in the App

1. Open the dashboard in your browser.

2. In the sidebar, find “Upload export”:

The screenshot shows a Streamlit application interface. On the left, there's a sidebar with sections for "Applications Data", "Pending - Student Budget", and "All Students - Combined List".

Applications Data:

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
SMD Student Travel (Credit-Bearing Elective)	Pending	1	0	0
University of Bristol	Pending	1	14550	14550

Pending - Student Budget:

Program	Status	Student Count	Cost per Student (USD)	Budget (USD)
SMD Student Travel (Credit-Bearing Elective)	Pending	1	0	0
University of Bristol	Pending	1	14550	14550

All Students - Combined List:

Cohort	UR ID	First Name	Last Name	Email	Program Name	Application Status	Program Term	Program Year	
0	Approved	32502657	Laureenhill	Ambe	lambe@u.rochester.edu	DIS - Study Abroad in Stockholm, Sweden	Committed	Spring	2026
1	Approved	32647686	Tatum	Gibson	tgibbs12@u.Rochester.edu	DIS - Study Abroad in Copenhagen, Denmark	Committed	Spring	2026
2	Approved	32537444	Sabina	Hege	shege@u.rochester.edu	DIS - Study Abroad in Copenhagen, Denmark	Committed	Spring	2026
3	Approved	32570076	Sara	Mazur	smazur@u.rochester.edu	DIS - Study Abroad in Copenhagen, Denmark	Committed	Spring	2026
4	Approved	32611304	Jessica	Dong	jdong21@URMC-SH.Rochester.edu	IES Abroad London - Health Practice & Policy	Committed	Spring	2026

3. Click **Browse** and select your .txt file.

This is a screenshot of the "Applications Data" section of the Streamlit app. It includes fields for "Upload export (optional)", "Drag and drop file here", "Browse files", "Use latest repository file", and a "Source" section containing the file path and timestamp.

Source:
20251020115839.txt
(2025-10-20 11:58:39 EDT)

4. The dashboard will load your data instantly for the session.

(Note: Uploaded files via app are temporary and not saved to GitHub.)

Understanding the Dashboard Layout

Section	What You See	What It Means
Top Bar (KPIs)	Approved Students, Pending Students, Budgets	High-level summary of all applications
Approved - Student Budget Table	Program-wise breakdown for committed or granted students	Total confirmed spending
Pending - Student Budget Table	Programs still under review or provisional	Potential future spending
All Students List	Complete exportable table	Includes names, emails, terms, and statuses
Exports Section	Download buttons for Word, PDF, Excel	For sharing with directors or finance team

Maintenance:

Task	How Often	Role	Notes
Upload new file export	Every new batch (Daily)	Staff	Must use numeric filename
Update cost file (ProgramCost.csv)	When program costs change	Staff/Analyst	Check columns are correct
Review dashboard data	After upload	Staff	Confirm correct number of students
Report technical issues	As needed	Staff/Analyst	Screenshot + issue description

Data Input Requirements

a. Applications File

- Must be placed in ./data/
- Filename: numeric timestamp (no letters)
 - Format: YYYYMMDDHHMMSS.txt
 - Example: 20251013112810.txt
- Must include columns:
 - Program Name or Program_Name
 - Application Status
 - Program Term
 - Program Year

b. Program Cost File

- Located in ./data/
- Accepted formats: .csv, .tsv, .txt, .yaml, .yml, .json
- Must contain:
 - Program Name
 - \$ Cost/Student

Application Logic Overview

File Detection Logic

- The dashboard looks inside the **data/ folder** of the GitHub repository every time it runs.
- It searches only for .txt files whose names are made of **numbers only** (e.g., 20251013112810.txt).
- From those, it **picks the latest file** by comparing the date and time hidden inside the filename.
 - Example:
 - 20251009113620.txt → 2025-10-09 11:36:20
 - 20251013112810.txt → 2025-10-13 11:28:10
 - The second file is newer, so it's used automatically.
- This way, staff never need to manually rename or select files inside the app - the newest one always loads first.

Cost Mapping Logic

- The dashboard also loads the ProgramCost.csv file, which lists how much each program costs per student.
- It matches programs by name (for example, “IES Abroad Barcelona – Engineering”) and merges that cost into the student application data.
- If a program name is missing in the cost file, it shows up under “Programs Missing Cost Mapping” for easy review. In the project data folder, click on “ProgramCost.csv” file:

A screenshot of a GitHub repository named "ceaur / cea-budget-dashboard". The repository has a single commit from "ceaur" titled "Delete data/wd". The commit message is "Delete data/wd". The commit was made last week. The repository contains several files: main, ProgramCost.csv, cea_budget_app.py, requirements.txt, and a folder named "data" containing 20251013112810.txt, 20251013112810.txt, and ProgramCost.csv. The ProgramCost.csv file was added via upload last week.

- Program Costs can be updated on Github/data/ProgramCost.csv and the system will automatically detect the updated price:

A screenshot of a GitHub repository named "shanalishah / study-abroad-budget-dashboard". The repository has a commit from "shanalishah" titled "Update ProgramCost.csv" made 2 weeks ago. The commit message is "Update ProgramCost.csv". The repository contains several files: main, ProgramCost.csv, README.md, cea_budget_app.py, and requirements.txt. The ProgramCost.csv file is currently being previewed. It is a CSV file with the following data:

#	Program Name	\$ Cost/Student
1	3rd Party Programs	
2	Advanced Studies in England	\$22,800.00
3	CIEE Central European Studies Program in Prague, Czech Republic	\$19,950.00
4	CIEE Middle East Studies in Amman, Jordan	\$17,950.00
5	CIS Abroad Semester in Barcelona - Universitat Autonoma de Barcelona	\$17,590.00
6	College Year in Athens - Semester and Academic Year Program	\$26,500.00
7	DIS - Study Abroad in Copenhagen, Denmark	\$29,950.00
8	DIS - Study Abroad in Stockholm, Sweden	\$29,950.00
9	IES Abroad Amsterdam - Psychology & Sciences	\$23,950.00
10	IES Abroad Amsterdam - Social Sciences & Humanities	\$23,950.00
11	IES Abroad Barcelona - Liberal Arts & Business	\$20,995.00
12	IES Abroad Barcelona - Engineering	\$20,137.00
13	IES Abroad Dublin Direct Enrollment - Trinity College	\$20,521.00
14	IES Abroad European Union	\$24,918.00
15	IES Abroad London - Health Practice & Policy	\$24,636.00
16	IES Abroad London - Social Sciences & Sustainability	\$22,432.00
17	IES Abroad London - Study London	\$22,432.00
18	IES Abroad London Direct Enrollment - University College London	\$25,990.00

Deduplication & Priority Logic

Sometimes, the same student appears multiple times (for example, if they applied to several programs or terms).

To prevent double counting, the dashboard:

1. Groups data by student email or ID
2. Keeps **only one record per student**, based on this priority order:
 1. **Committed**
 2. **Permission to Study Abroad: Granted**
 3. **Provisional Permission**
3. If a student has multiple applications in one of the same above mentioned criteria, e.g. a student has multiple applications in the Permission to Study Abroad: Granted section, the system will consider the application record with the **highest cost**. This ensures totals and budgets aren't inflated.

Budget Calculation Logic

Once the data is cleaned and matched:

1. The dashboard counts the number of students in each program and status.
2. It multiplies:

$$\text{Student Count} \times \text{Program Cost per Student} = \text{Total Budget Exposure}$$

3. It then sums up all programs to show the totals for:
 - o Approved students
 - o Pending students
 - o Total combined budget

Display & Export Logic

- All calculations are performed instantly when the dashboard loads.
- Results are displayed under clearly labeled sections:
 - o **Approved - Student Budget**
 - o **Pending - Student Budget**
 - o **Budget Summary by Status**
- Staff can also export the results:
 - o **Word (.docx)** - summary for management reports
 - o **PDF (.pdf)** - printable format
 - o **Excel (.xlsx)** - for detailed review or financial reconciliation