

IRB Application for Research with Human Subjects Colby College, Student Version

Please insert the information requested below. Supplementary information (e.g., consent form, debriefing script, measures) should be inserted at the end of this document. Submit your completed application as a single document to your research supervisor. Your supervisor will then forward it to institutionalreviewboard@colby.edu.

Part 1: Overview to determine exempt from full review status

Is your data collection procedure fully anonymous? (Data are not anonymous in any case where participants Colby ID, name, email address or similar information is included.)

YES **NO**

Are you working with special populations? (Special populations include children, prisoners, or anyone who is not be able to give consent.)

YES **NO**

Will participants perform tasks that are not normally encountered in their daily life in school or work?

YES **NO**

Is there any potential that your participants will be injured or upset as a result of participating in your study?

YES **NO**

Part 2: Filing Information

A. *Researcher name(s)*: Trey Tuscai, Eli Giglietti, Ryan Mogau

B. *Email address(es)*: tvtusc25@colby.edu, egigli25@colby.edu, rmogau25@colby.edu

C. *Phone number(s)*: (713) 969-8402, (617) 939-3800, (585) 978-6703

D. *Faculty supervisor*: Naser Al Madi

E. *Course number, if applicable*: CS422

F. *Project title*: DevReady – AI-Powered Coding Interview Prep - A/B Testing

G. *Describe the purpose of this research, in approximately one page.*

The purpose of this research is to evaluate the effectiveness of an AI-powered coding interview preparation platform, DevReady. DevReady is designed to help users build confidence and improve their performance in technical interviews by providing a structured, interactive learning experience. The platform features a series of progressively challenging coding problems and real-time AI-generated feedback, as well as an integrated environment to write and run code against test cases.

This study aims to assess how users engage with the platform, how effective the AI feedback is in facilitating learning, and how user behavior varies across problem difficulty levels. To do this, we will collect anonymous usage data from participants as they interact with the platform.

We will use Google Analytics and logging to track:

- **Page navigation:** Which coding problems or features participants access, and in what sequence.
- **Time on task:** How long participants spend on each coding problem or page.
- **Click events:** User interactions such as submitting a solution or requesting a hint.
- **Completion rates:** Whether users complete individual problems or leave them unfinished.

All data collected is anonymized and does not include personally identifying information such as name, email address, or IP address. Our goal is not to evaluate individuals, but to evaluate the platform's design and functionality, especially in terms of its impact on learning and user engagement. Collecting this aggregate data will allow us to develop an invaluable understanding of the way that users engage with our product, without infringing upon user privacy.

The results of this research will inform further development of DevReady, helping us refine our AI feedback and improve the user interface.

H. *List the sources of funding for this research, if any (e.g., Colby grant, NIMH grant).*

N/A

Part 3: Procedures

A. *Describe the method that you will use to obtain participants' informed consent. Attach a copy of the consent form (and any release forms, if applicable) at the end of this application. If you are requesting a waiver of the requirement to obtain and document informed consent, explain the rationale for this request (see <http://answers.hhs.gov/ohrp/categories/1566>).*

A copy of the consent form is attached at the end of this application.

We request to opt out of the written consent due to the nature of the experiment.

B. *Describe the research procedure in detail, including any experimental manipulations and questionnaire/interview/observational measures. Attach a copy of all measures at the end of this application.*

A copy of all measures is attached at the end of this application.

C. *Will the research involve deceiving participants in any way? If so, describe the nature and purpose of the deception.*

No, the research will not involve deceiving participants in any way.

D. *Describe the method that you will use to debrief participants. Attach a copy of the debriefing script at the end of this application.*

No debriefing.

Part 4: Risks and Benefits

- A. *Describe any foreseeable risks to participants (e.g., physical, psychological, social, privacy, legal).*

The research involves no risk to participants beyond those encountered in everyday activities.

- B. *Describe any foreseeable benefits of the research (to participants, to scientific knowledge, and to the general population).*

The research may benefit participants by offering early access to a new interview prep tool.

Part 5: Participant Information

- A. *List the intended number and source of participants (e.g., Colby students, local adults, respondents to an online survey).*

The intended number of participants for this study is 200, all of whom will be recruited from the computer science student population.

- B. *List the intended age and gender of participants.*

Participants will be aged 18 years or older, with no restrictions on gender.

- C. *Will you specifically select or exclude participants on the basis of any special physical or psychological conditions? If so, describe the nature and purpose of the selection criteria.*

Participants will not be excluded based on any specific physical or psychological conditions.

- D. *Describe the method that you will use to recruit participants.*

Participants will be recruited through emails sent via on-campus mailing lists. We may also directly ask acquaintances within the Colby computer science department and other US computer science departments who we anticipate would be interested in participating.

- E. *Will participants be compensated? If so, describe the form and amount of compensation (e.g., cash, gift card, Sona credit).*

No, participants will not be compensated.

- F. *Describe the location, duration, and scheduling of research participation.*

The research sessions will take place online. Each session is expected to last approximately 10 to 30 minutes.

- G. *Describe the method that you will use to ensure the anonymity or confidentiality of participant responses. Include a description of how you will securely store the data.*

Participant responses will be anonymized. Data will be stored on Google Analytics and our database, accessible only to the researchers and faculty supervisor.

- H. *Specify the location where participants' signed consent forms will be stored.*

We request to opt out of the written consent due to the nature of the experiment.

Part 6: Statement of Compliance and Signatures

I have read the ethical principles of the IRB and of my discipline, and I unreservedly subscribe to the principles they contain.

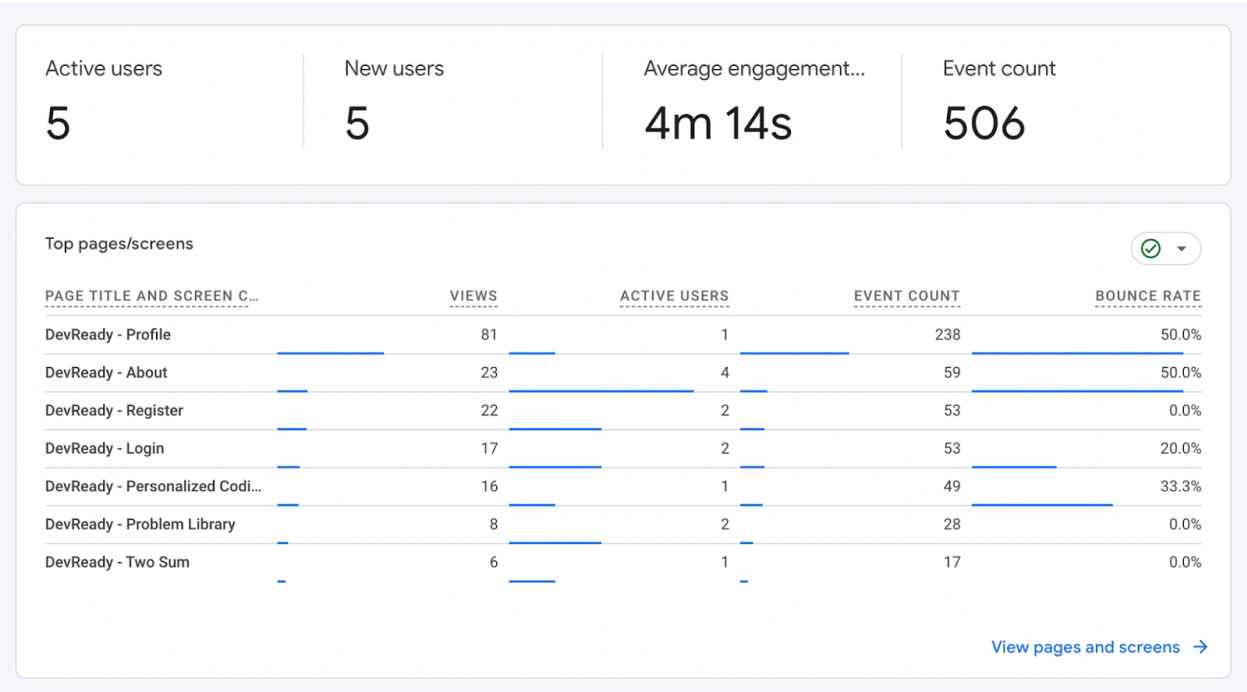
A. *Researcher (electronic) signature(s):* Trey Tuscai, Ryan Mogauro, Eli Giglietti

B. *Date:* 04/09/2025

Part 7: Supplementary Materials

Please paste below all relevant (a) consent forms or scripts, (b) debriefing forms or scripts, (c) survey or interview questions, and (d) additional measures or materials.

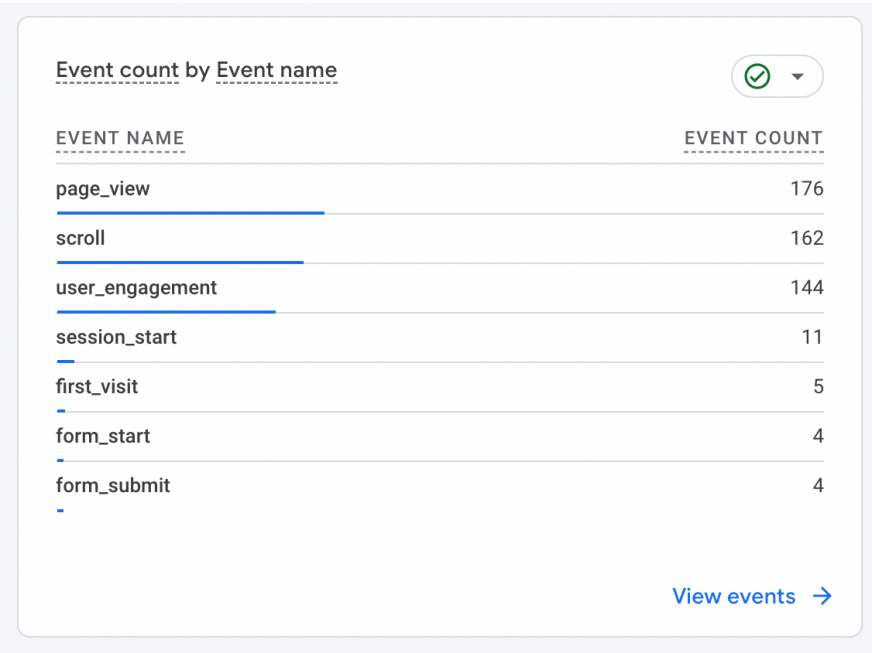
Copy of all measures: Participants will be asked to attempt an interactive coding problem on the DevReady platform. As they solve the problem, the platform will provide real-time AI feedback to guide their learning. Throughout the session, we will passively collect anonymous usage data via Google Analytics, including navigation behavior, time spent on each problem, and interaction events (e.g., solution submissions, hint requests). Below are examples of the charts used for recording usage measures.



Top pages/screens

PAGE TITLE AND SCREEN C...	VIEWS	ACTIVE USERS	EVENT COUNT	BOUNCE RATE
DevReady - Profile	81	1	238	50.0%
DevReady - About	23	4	59	50.0%
DevReady - Register	22	2	53	0.0%
DevReady - Login	17	2	53	20.0%
DevReady - Personalized Codi...	16	1	49	33.3%
DevReady - Problem Library	8	2	28	0.0%
DevReady - Two Sum	6	1	17	0.0%

View pages and screens →





Completion Date 17-Oct-2024
Expiration Date 17-Oct-2027
Record ID 65838738

This is to certify that:

Trey Tuscai

Has completed the following CITI Program course:

Social & Behavioral Research - Basic/Refresher
(Curriculum Group)
Social & Behavioral Research
(Course Learner Group)
1 - Basic Course
(Stage)

Not valid for renewal of
certification through CME.

Under requirements set by:

Colby College

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 17-Oct-2024. Verify at www.citiprogram.org/verify/?wfe602a16-e4bc-4ad6-a5b9-98ad8416d994-65838738



Completion Date 05-Apr-2025
Expiration Date 05-Apr-2028
Record ID 68812371

This is to certify that:

Eli Giglietti

Has completed the following CITI Program course:

Social & Behavioral Research - Basic/Refresher
(Curriculum Group)
Social & Behavioral Research
(Course Learner Group)
1 - Basic Course
(Stage)

Not valid for renewal of
certification through CME.

Under requirements set by:

Colby College

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 05-Apr-2025. Verify at www.citiprogram.org/verify/?w6ec3a6dd-b0c4-40c3-a7ab-98a886d98792-68812371



Completion Date 07-Apr-2025
Expiration Date 07-Apr-2028
Record ID 68921436

This is to certify that:

Ryan Mogauro

Has completed the following CITI Program course:

Not valid for renewal of
certification through CME.

Social & Behavioral Research - Basic/Refresher
(Curriculum Group)

Social & Behavioral Research
(Course Learner Group)

1 - Basic Course
(Stage)

Under requirements set by:

Colby College

CITI

Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 07-Apr-2025. Verify at www.citiprogram.org/verify/?w58c9c65e-ec41-456c-8500-f94a49aa6df5-68921436