



All Aboard Attendance Manual

CS 115
UC Santa Cruz
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Installation

Download the All Aboard Attendance project repository:

<https://github.com/wetsmith/AllAboardAttendance>

Ensure the necessary libraries are installed:

```
$ pip install Django
```

```
$ pip install qrcode[pil]
```

```
$ pip install networkx
```

```
$ pip install matplotlib
```

Initializing the database

From the command prompt, navigate to the **project directory**

```
...\AllAboardAttendance\AllAboardAttendance
```

Enter the following commands to initialize the database:

```
$ python manage.py makemigrations
```

```
$ python manage.py migrate
```

Then, use the following command and follow the prompts to create an All Aboard administration account.

```
$ python manage.py createsuperuser
```

This account has permissions to create new courses, students, and instructor accounts in the database.

Running the LocalServer

All Aboard Attendance is in its first release. **The platform does not currently have a host domain.**

To run the LocalServer, enter the following command in the **project directory**

```
$ python manage.py runserver
```

Several warnings will be produced regarding default initialization values. These can safely be ignored.

Accessing the LocalServer from your browser

From your browser, navigate to the localhost URL The **default port** Django uses is 8000:

<http://localhost:8000/>

The All Aboard Attendance home page should appear.

Welcome to All Aboard Attendance!

All Aboard Attendance is a new, efficient way of taking attendance. Instead of relying on roll call, sign-in sheets, or easily tricked login systems, All Aboard utilizes an insightful method to quickly take attendance and generate valuable data on student attendance trends.

To get more information about our system, please visit our GitHub.

[Learn more](#)

Creating instructor accounts

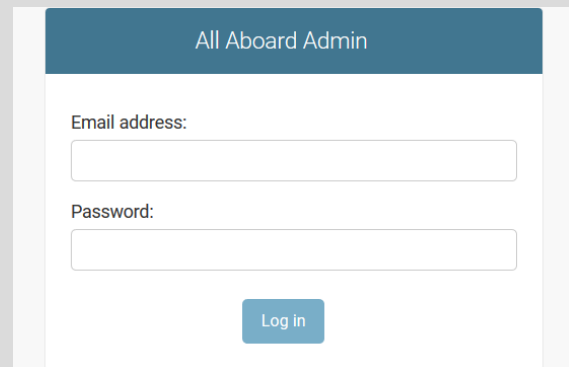
With the LocalServer running, in a web browser navigate to

<http://localhost:8000/admin/>







Log in using the admin credentials created during database initialization.

Under **Accounts**, next to **Users**, click  **Add**

Fill in the account creation form and click **SAVE**. If you wish to add multiple instructor accounts, click **Save and add another**.



The login form is titled "All Aboard Admin". It contains two input fields: "Email address:" and "Password:". Below the password field is a "Log in" button.

ACCOUNTS	
Users	 Add  Change
COURSE	
Courses	 Add  Change
Students	 Add  Change

Creating courses

With the LocalServer running, in a web browser navigate to

<http://localhost:8000/admin/>

Log in using the admin credentials created during initialization if necessary.

Under **Course**, next to **Courses**, click  **Add**

From the **Teacher** drop-down list, select the **instructor account email** associated with the course.

Complete the rest of the form and click **SAVE**. If you wish to create multiple courses, click **Save and add another**.

Creating students

With the LocalServer running, in a web browser navigate to

<http://localhost:8000/admin/>

Log in using the admin credentials created during initialization if necessary.

Under **Course**, next to **Students**, click  **Add**

Fill out the student ID and assign the proper **Course** from the **Course** drop-down list. *For this release, we encourage the use of student CruzID's for the student ID field.*

Welcome!

Log In

Logging in as an instructor

With the LocalServer running, in a web browser navigate to

<http://localhost:8000/>

From the **navigation bar** or **navigation drop-down menu**, click **Courses**.

Enter valid **instructor account credentials** and click **Log In**.

Creating new lectures

With the LocalServer running, in a web browser navigate to

<http://localhost:8000/>

If necessary, **Log in as an instructor.**

From the **navigation bar** or **navigation drop-down menu**, click on **Courses**. *If this loads an empty page, then the currently logged in account has no courses associated with it.*

The current URL should resemble

<http://localhost:8000/course/>

On this page, select the course that requires a new lecture.

Next to **Lecture Title**, enter in the preferred lecture title and click **Start New Lecture**.

Students can sign in to the attendance page for fifteen minutes following initial lecture creation. After this window has elapsed, students will no longer be able to sign in.

All Aboard Attendance Home Courses Admin

Demonstration Course 1

Demonstration Course 2

Demonstration Course 3

Demonstration Course 4

All Aboard Attendance Home Courses Admin

Demonstration Course 1

Lecture Title: Start New Lecture

First lecture

created July 21, 2019, 5:50 p.m.

Second lecture

created July 21, 2019, 5:50 p.m.

Viewing a created lecture

While logged in as an instructor, navigate to

<http://localhost:8000/course/>


If this page is empty, there are no courses or lectures associated with the currently logged in account.

Click the course that contains the desired lecture. *If there are no lectures, then the selected course has no lectures associated with it.*

The loaded page should contain a **QR Code**, **student sign-in URL**, and a **three lists of students (Present, Partial, and Absent)**.

All Aboard Attendance Home Courses Admin Log Out

First lecture
July 21, 2019, 5:50 p.m.



www.AllAboardDomain.com/course/d9yrd4asxb/sign-in/

Present:

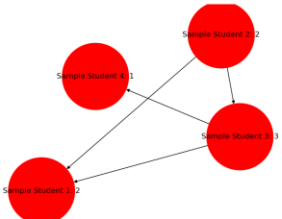
Student ID	# of Connections
Sample Student 1	2
Sample Student 2	2
Sample Student 3	3

Partial:

Student ID	# of Connections
Sample Student 4	1

Absent:

Student ID	# of Connections
Sample Student 5	-1
Sample Student 6	-1



Present:

of Connections
2
2
3

Partial:

of Connections
1

Absent:

of Connections
-1
-1

Attendance Status

On a created lecture's page, note the lists of student. Upon lecture creation, all students will be under **Absent**.

Students listed under **Absent** have not yet signed in to the student attendance page. They will have **-1** connections.

Students listed under **Partial** have signed in but have not yet made **at least two connections** with other students.

Students listed under **Present** have signed in and have made **at least two connections**.

First lecture

July 21, 2019, 5:50 p.m.



www.AllAboardDomain.com/course/d9yrd4asxb/sign-in/

Lecture QR Code

On a created lecture's page, note the **QR Code**.

This code contains the URL that hosts the student sign in page. *In the current release, this is mapped to the localhost:8000/ URL, not www.AllAboardDomain.com/ as displayed on the lecture page.*

This QR code and URL are meant to be displayed to students so that they may quickly access the student sign-in page.

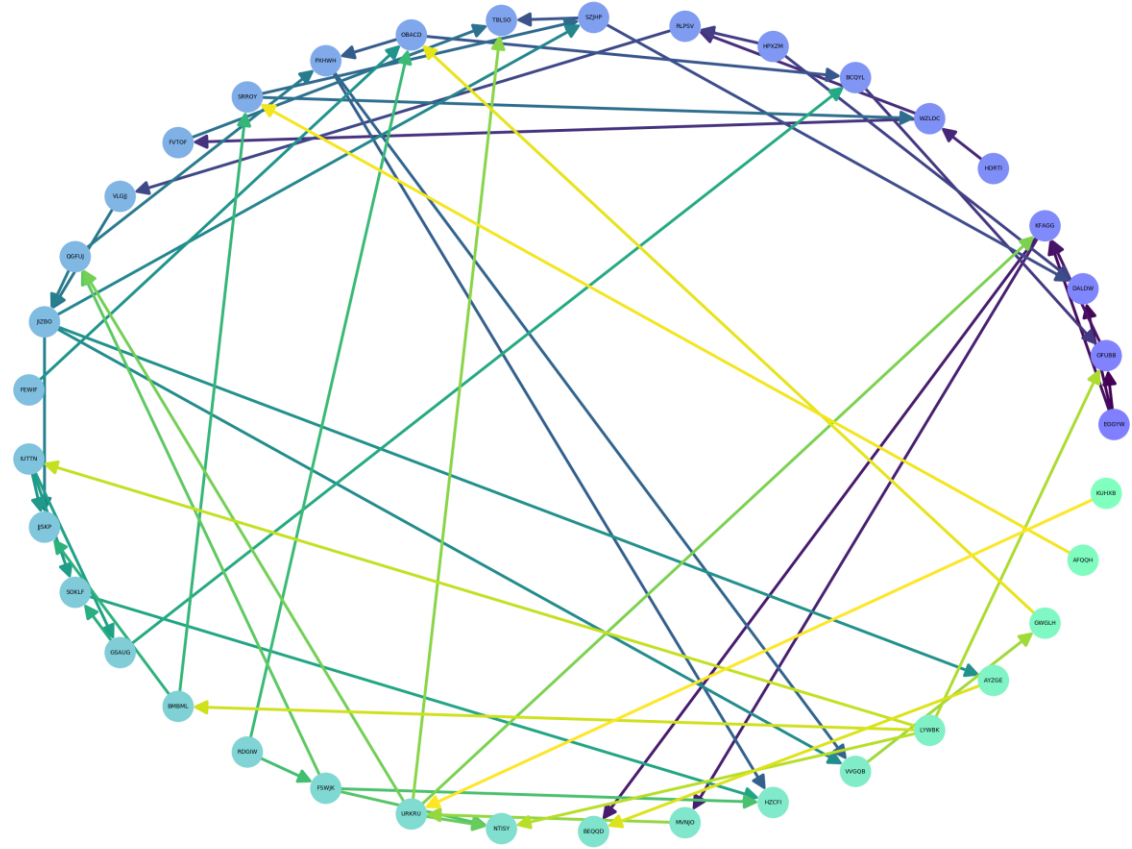
Understanding the Attendance Network

Every colored node is a student.

An edge connects two students who have exchanged ID.

An edge correlates with proximity between two students.

The arrow points *away* from the student who provided their ID, and *towards* the student who entered it.



Signing in as a student

If the student has a **QR Scanner**:

- Scan the lecture QR code provided by the professor.

If the student **does not have a QR scanner**:

- Enter in the URL provided by the professor in any browser.

*In the current release, the sign-in URL is mapped to the localhost:8000/ URL, **not** www.AllAboardDomain.com/ as displayed on the lecture page.*

Next to CruzID, enter your CruzID. Note that if the Student ID set by the admin is **not a CruzID**, this field is misleading. It requires whatever the given **Student ID** is, which is not necessarily a valid CruzID.

All Aboard Attendance

Sign into: First lecture

CruzID: @ucsc.edu

Sign-in

Exchanging IDs as a student

After logging in to an open lecture as a student, note that a **Temporary ID** is displayed.

From here, a student can either

1. Give another student this temporary ID
2. Enter the temporary ID given to them by another student.

Once this exchange is done, both students will be marked as having connected with each other.

This exchange only needs to be done once for any given pair of students. For instance, if Sally gives her temporary ID to Jim, they are both marked as connecting. Jim does not need to give his ID to Sally.

Exchange IDs with as many different students as is required to be marked present. **In the current release of All Aboard Attendance, the number of connections required to be marked present is two.**

All Aboard Attendance

Welcome to First lecture, Sample Student 1

Your unique code: 0925M

You currently have: 0 / 2 connections

Peer Code: JTC7H

Sign-in

Recommended Usage

- All instructors using All Aboard should have their own account. That way, they only see the attendance trends in the courses they are teaching.
- An admin account should belong to one person alone. This allows alterations to the database to be associated with the individual who uses an account, rather than the account multiple users share.
- Creating a new lecture represents opening attendance for that class. Do not open lectures in advance, as **the attendance window only lasts for fifteen minutes.**
- Student IDs can be anything, but **it is *highly* recommended they be the student's email identity.** For instance, a UCSC student's ID would be their CruzID.