



# The Daily Roar: Innovative Email Broadcasting System

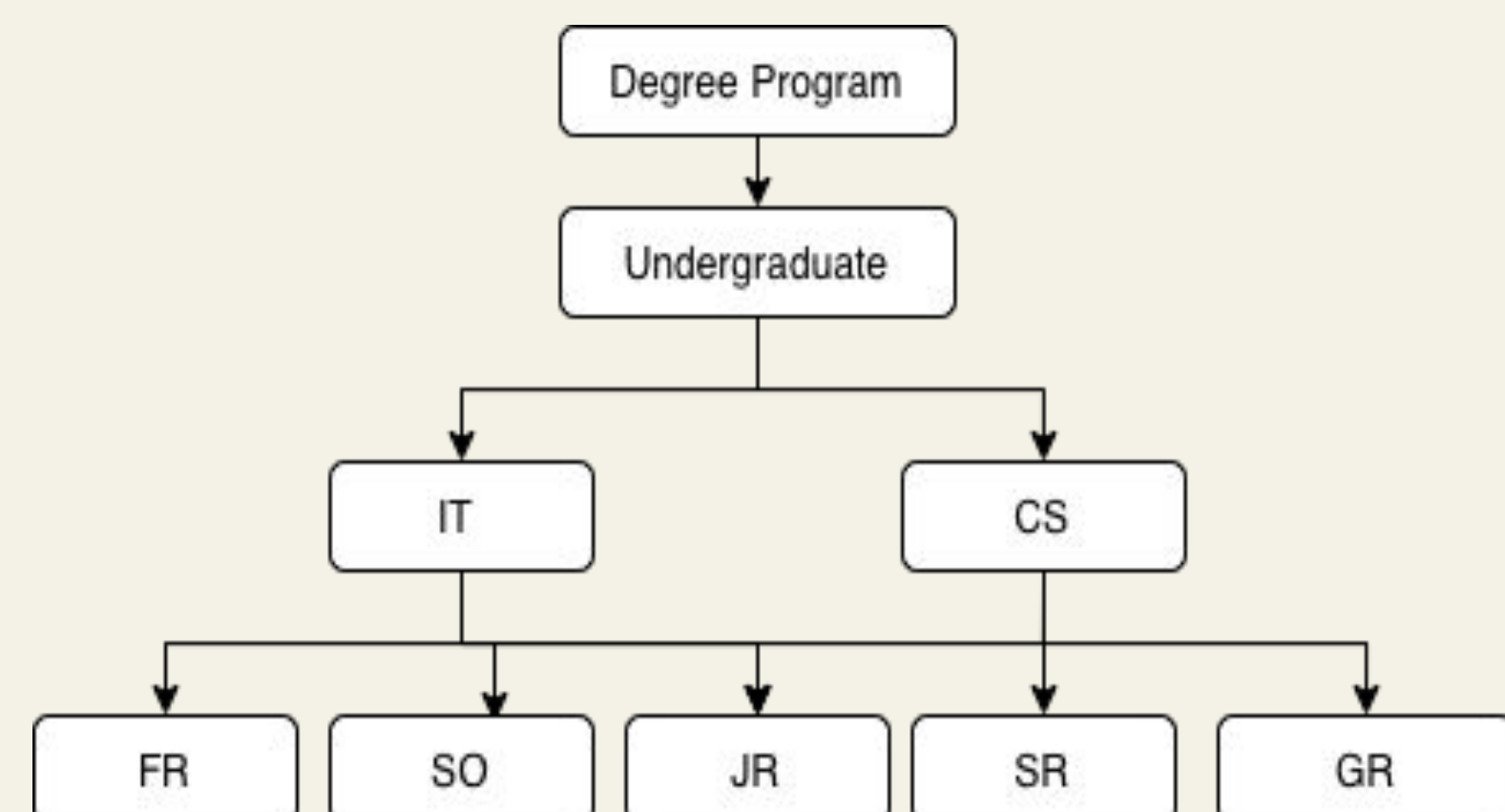
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## Abstract

The Kean University Department of Computer Science and Technology works to increase student involvement in events that contribute to career development. Events such as ACM, group advising sessions, and visits from industry are announced to students through their university emails. Analysis shows current engagement with emails can be higher, as only 20%-30% of students view emails and less than 5% of students interact with the email (clicking hyperlinks). This research develops a new system to broadcast emails, it strives to increase the viewing rate of emails by 66% and increase link click-through rate by 100%.

## System Goals and Objectives

- Send emails based on categories



- The department will be able to upload a CSV with student information every semester
- The system will detect if the email has been viewed
- The system will detect if the links are being clicked
- The system will provide statistics on email viewing and click-through rate

## Tools

MySQL, JavaScript, jQuery, Bootstrap, HTML, CSS, Ajax, Papa Parse API, Quill API, Apache Web Server, Github, Agile SDLC Methodology, GUI testing

How often do you attend events mentioned in emails for the Department of Computer Science and Technology?

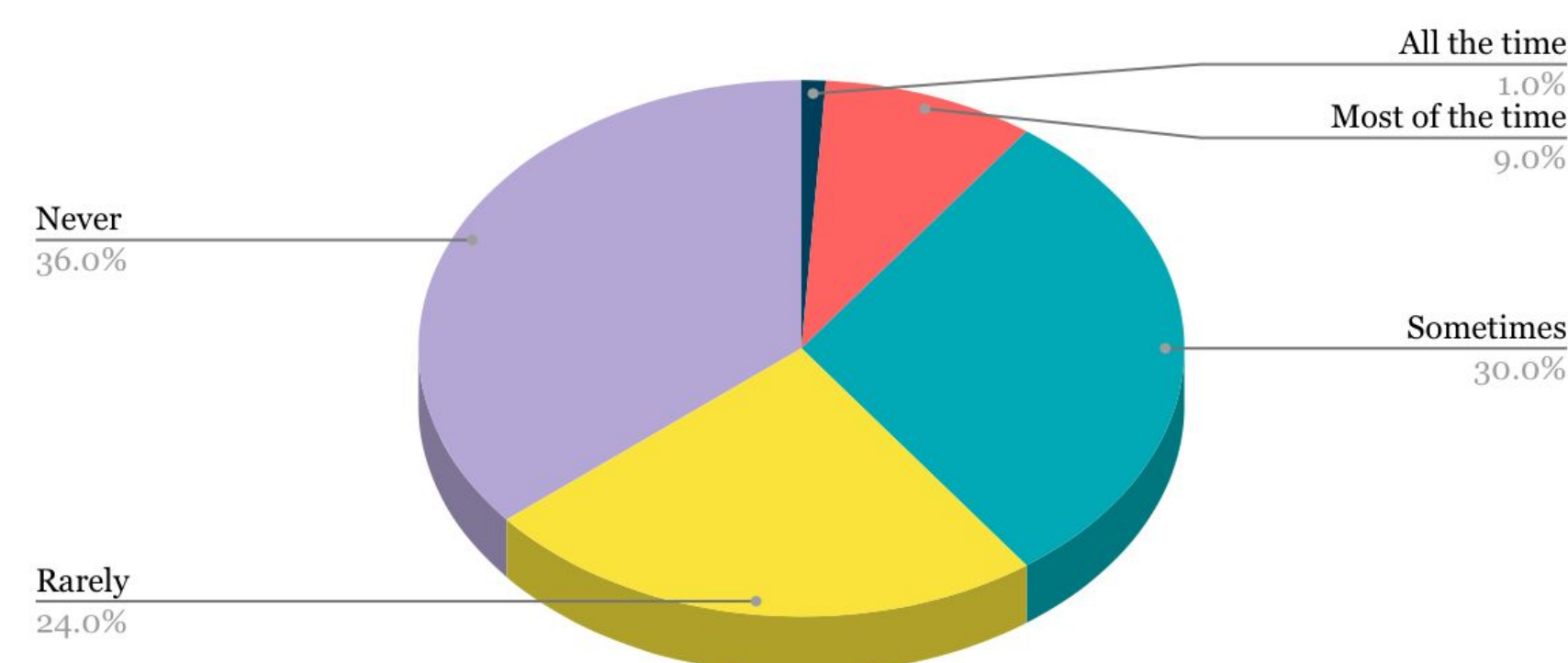
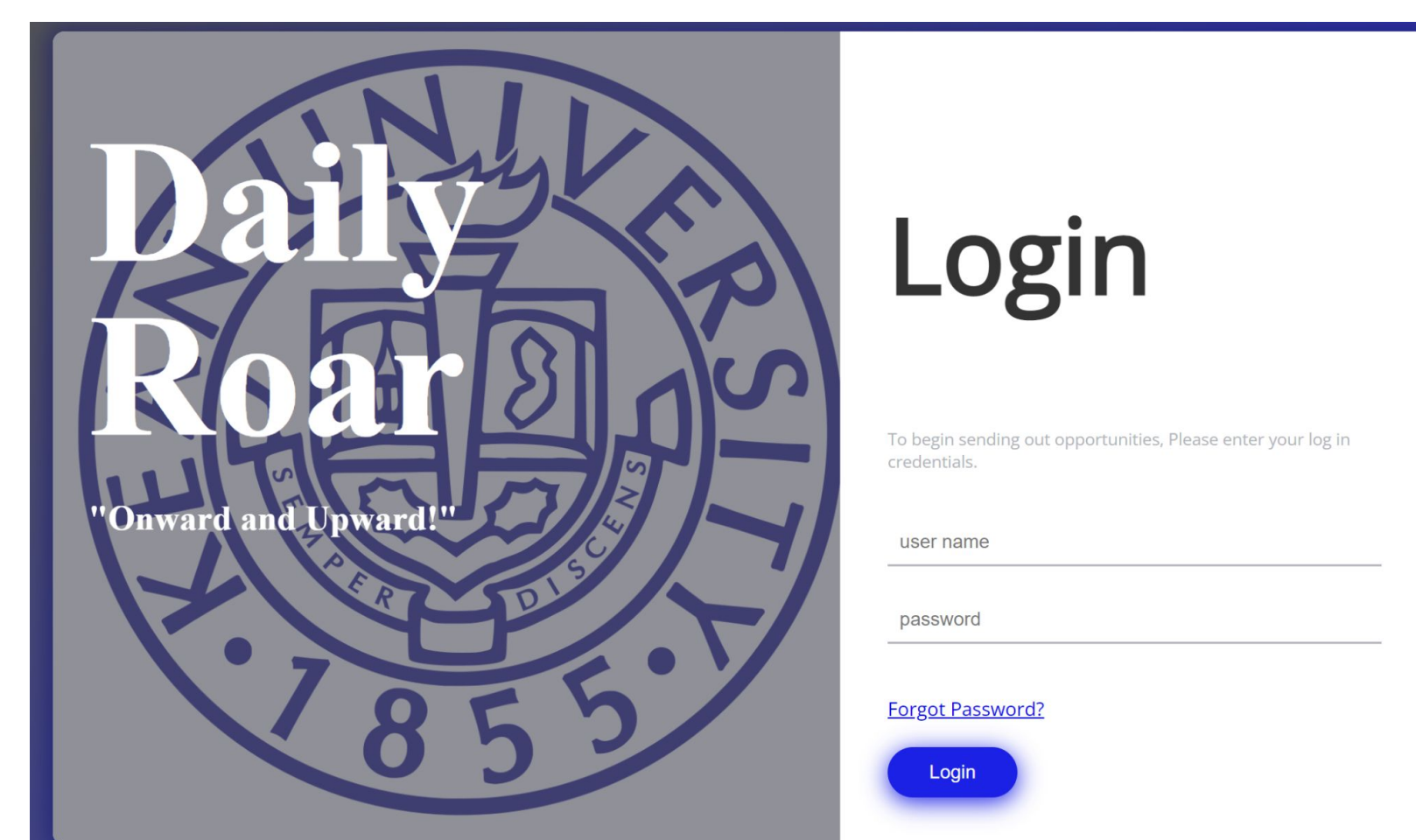


Figure 1: Survey Question One



Scan to preview the website!

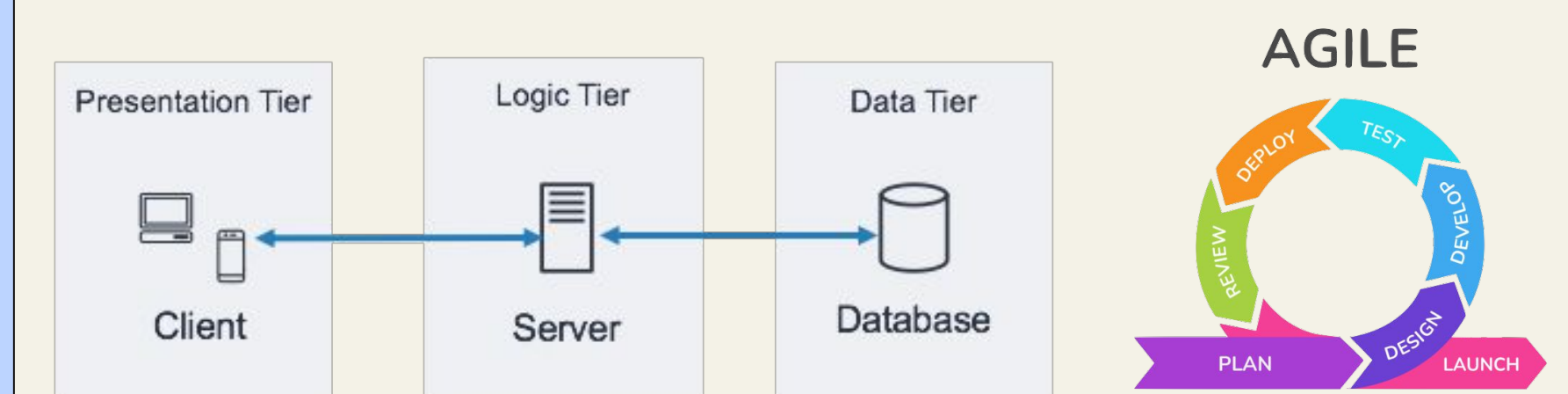
```
//attach tracking link
$new_body = $body. '';
```

Figure 2: Link with unique ID parameters embedded in each email sent

```
$query = "UPDATE Tracking set Opened = 1 where StudentID = :student_id AND EmailID = :email_id;";
```

Figure 3: Code executed upon loading embedded link; labels email as opened in the database

## Methodology



### Roles

Project Manger	System Analyst	Front-end Developer	Back-end Developer	Tester
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- An anonymous student survey was conducted with a wide demographic of students (n=34)
- Quill Rich Text Editor:** utilized to create email function
- Papa Parse:** utilized to interpret and extract data from CSV
- Email Open Tracking:** Hidden pixel image embedded within the email that tracks interactions to database. Updates accordingly [1].
- Link Click Through:** Unique link for each email recipient with a unique embedded identifier. Clicking on the link redirects to PHP that will keep track of hyperlink clicking.
- Multiple tests were conducted to ensure the system has no bugs or risks

## Results/Future Works

The software system is currently being hosted on obi.kean.edu and is functional. Staff using the system are able to consolidate student/department communication regarding internships, events and other opportunities from a singular source to alleviate students from numerous emails from a plethora of sources while tracking interactions. If able to, future efforts would be dedicated to manufacturing a student dashboard that tracks all generic department events and emails.

## References

- <https://www.webslesson.info/2018/08/how-to-track-email-open-or-not-using-php.html>
- <https://joinhandshake.com>