

# **Family Tyes: Tracking System**

## **Executive Summary**

### **Community Partners**

Paul Hindes

Bill Stein

### **Student Development Team**

Angela M. Liu

Laura A. Lodewyk

Ming Y. Wu

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## **Background**

Family Tyes is a non-profit educational and youth development organization that introduces youth groups in the Pennsylvania region to fly-fishing, environmental conservation and leadership. Family Tyes' curriculum has grown to five states and every year they work with about 1000 kids. Their staff consists of 18 members and around a dozen volunteer mentors who assist in teaching classes and workshops. Family Tyes currently has an organization website (familytyes.org) as well as a deployed Ruby on Rails application (FT Tracking System) for attendance tracking. Though both systems were designed by external technical teams, core technology management functions are handled internally by leaders in the Family Tyes organizations, notably Bill Stein and Paul Hindes.

## **Project Description**

### **Project Opportunity**

The main problem Family Tyes faces is providing solid data to funders about the impact they have on the students enrolled in their programs. Solving this problem would help the organization secure current funding, as well as acquire new funding from outside sources. The previous IS team made headway into creating a system that would track students, but did not get far enough as to provide the metrics and analytics that Family Tyes needs. Solving this issue would also allow Family Tyes to understand their impact on their students and therefore adapt their programs to more closely fit student needs. As such, extending the current tracking system to send questionnaires and visualize, analyze, and present relevant data on students would be extremely valuable for the organization.

### **Project Vision**

Family Tyes needed the ability to demonstrate student improvement and learning to funders, as well as tell a story about their impact on the lives of participants. To accomplish this, Tech Tyes decided to extend the functionality of the existing Family Tyes Tracking System to collect and analyze data about students. In particular, we implemented a checkpoint system that collected data such as student demographics, student learning outcomes (pre-test and post-test results), individual reflections/comments on the program, and other quantitative and qualitative data points. This includes displaying summary data such as total number of program participants, demographic breakdown of participants, and how participants scored on the pre-test versus the post-test, etc. For

Family Tyes, this data analytics/visualization implementation will allow them to provide solid evidence of their impact on the community and aid in their appeals for more funding.

## **Project Outcomes**

Our final deliverable includes a system with improved functionality, including SurveyMonkey integration, graded checkpoints, and visualization data. We also created the leader user and the ability to one-click send emails with survey links. To ensure the sustainability of the system we deployed the project to an easily-transferable server and held training sessions with the client. For the client's documentation we provided a step-by-step instruction guide to the system, as well as a FAQ on the site. For future technical developers, we have technical documentation that details the reasoning behind decisions, as well as documented code.

## **Project Deliverables**

At the end of this project, we delivered a deployed and extended tracking system for Family Tyes. Aside from the deployed system, we also handed over the following documents to Family Tyes:

- Github Repository for the Family Tyes Tracking System
- Step-by-Step System Reference Guide/Walkthrough for General Users
- FAQ embedded within the Family Tyes Tracking System
- Tech Tyes SurveyMonkey account with pre-populated surveys and survey templates
- Tech Tyes Gmail Account & Mashery API Account Credentials
- Technical Documentation for the Survey Monkey integration
- Documentation of our system design decisions for future developers System Diagrams

## **Recommendations**

In the future, there are a few features that could increase the value of our solution. To increase student participation, a point-based incentive system could be created. The points could then be redeemed for badges, special events, or other appropriate items. In addition, by implementing student login functionality, Family Tyes could capture student reflections on their progress through the program in a 'Fish Tales' journal. Together, these improvements would increase use of the system and provide more data and information to Family Tyes that could be used to secure funding.

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## **Student Development Team**

**Angela Liu** served as the Technical Lead for the project. She is a junior double majoring in Information Systems and Human Computer Interactions graduating Spring, 2016. She is interning at Salesforce this summer and is interested in a career in software development and UI/UX.

**Laura Lodewyk** served as the Business Liaison for the project. She is a junior Information Systems Major graduating in the Spring of 2016. Laura is participating the CMU's TCinGC program this summer and is interested in pursuing a career in Project Management.

**Ming Wu** served as the QA & Documentation lead for the project. She is a junior Information Systems major graduating in Fall 2015. Ming is excited to be doing cybersecurity consulting with PwC this summer and is interested in a career in Information Security.