

# Executive Summary

**Community Partner**

Youth Enrichment Services

**Student Consulting Team**

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## Background

Youth Enrichment Services (YES) is a nonprofit organization founded in 1994 dedicated to empowering socially and economically at-risk youth in Western Pennsylvania through mentorship, education, and enrichment programs. Over the past 31 years, YES has served more than 5,000 young people, invested over \$900,000 in youth wages and stipends, and established strong partnerships with local government and community organizations.

## Project Description

*Project Opportunity:* YES currently faces operational inefficiencies due to heavy reliance on decentralized data management systems such as Google Sheets, Gmail, and Monday.com, with limited internal technical support. This has caused data fragmentation, security vulnerabilities, duplicated work, and difficulties in reporting and program evaluation for staff. Previous attempts to adopt solutions like Salesforce and Monday.com were abandoned due to complexity and poor user adoption. The organization now seeks a more sustainable, intuitive, and scalable solution, with Airtable emerging as a strong candidate.

*Project Vision:* The vision is to design and implement a centralized, secure, user-friendly database system using Airtable. This solution helps non-technical staff and will enhance staff efficiency, ensure accurate data synchronization across programs, improve data privacy with role-based access control, and streamline reporting and communication processes. The system should ultimately allow YES staff to manage student information confidently, protect sensitive data, and better serve their youth programs.

## Project Outcomes

*People:* Staff will be trained to use Airtable effectively for data entry, retrieval, and reporting, with improved confidence in handling program data securely and accurately.

*Process:* YES will move from a fragmented data environment to a centralized, structured Airtable database with custom interfaces tailored to staff roles, improving day-to-day workflow and minimizing errors.

*Technology:* Airtable will serve as the primary CRM platform. Data from Google Sheets will be ported into Airtable using custom Python scripts. Staff will interact with the data through specially designed Airtable Interfaces that make it easy to query, filter, and update information based on user roles, improving accessibility and security.

## Project Deliverables

**Database Design:** Previously, student information was stored across multiple disconnected Google sheets, resulting in data duplication, inconsistencies, and slow manual lookup. We designed a

normalized Airtable base linking their data tables such as Students, Programs, Medical Records etc. with clear relationship structures. This helps reduce redundancy, improve data consistency and allows for faster student information lookup.

**Data and Transfer Automation:** To migrate and maintain the new database, we created a set of scripts that automate splitting master CSV files into normalized tables, auto-linking related records, and validating data for formatting errors and duplicates. Mock data was generated to test workflows. Automation minimizes manual data errors and reduces the time needed for future imports or updates. Each script is documented to support future use and maintenance.

**Airtable Interfaces:** We created a suite of customized Airtable Interfaces that allow staff to quickly access and manage student information through intuitive views, search filters, and quick-access tabs. The interfaces support key use cases such as medical status, photo permissions, transportation needs, and dietary restrictions, while prioritizing ease of use and data privacy.

## Recommendations

We recommend YES adopt Airtable as their new data management platform due to its balance of usability, scalability, and security. Specific recommendations include:

- Conduct hands-on Airtable training workshops for staff to ensure smooth onboarding.
  - Designate an internal Airtable "champion" to manage and update the database post-deployment.
  - Regularly audit data integrity and access controls to maintain data security.
  - Periodically reassess Airtable's functionality and scalability needs as YES grows.
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## Student Consulting Team

**Vicky** is currently a junior majoring in Information Systems with a minor in Software Engineering. She served as the quality assurer of this project. She will be working as a SWE this following summer.

**Kester** is currently a junior majoring in Information Systems with an additional in Computer Science. He served as the tech tech lead of this project. He is working as a SWE this following summer.

**Sherry** is currently a junior majoring in Information Systems with a minor in Machine Learning. She served as the project manager of this project. She will be working as a SWE this following summer.