**Paul Quinn College IT Analytics Dashboard**

A comprehensive IT spend management and analytics dashboard designed specifically for Paul Quinn College, featuring multi-persona views for CFO, CIO, and CTO roles.

**🎯 Features**

* **Multi-Persona Dashboards**
  + CFO View: Financial oversight and cost optimization
  + CIO View: Strategic IT portfolio management
  + CTO View: Technical operations and infrastructure
  + Project Manager View: Project tracking and resource management
* **HBCU-Specific Modules**
  + Grant compliance tracking
  + Cost per student served metrics
  + Resource maximization analytics
  + Student success ROI calculations
* **Comprehensive Analytics**
  + IT spend tracking and analysis
  + Vendor management and contract monitoring
  + Project portfolio management
  + Risk assessment and mitigation
  + Usage and efficiency metrics

**📁 Project Structure**

├── src/

│ ├── dashboard/ # Streamlit dashboard applications

│ ├── data\_processing/ # Data analysis and processing scripts

│ ├── utils/ # Utility functions and data generators

│ ├── tests/ # Unit tests

│ └── hbcu\_modules/ # HBCU-specific functionality

├── data/

│ ├── raw/ # Original data files

│ ├── processed/ # Processed data files

│ └── mock/ # Mock data for testing

├── config/ # Configuration files

├── docs/ # Documentation

└── .streamlit/ # Streamlit configuration

**🚀 Getting Started**

**Prerequisites**

* Python 3.8 or higher
* pip (Python package manager)

**Installation**

1. Clone the repository:

git clone https://github.com/Texasdada13/paul-quinn-it-dashboard.git

cd paul-quinn-it-dashboard

1. Create a virtual environment:

python -m venv venv

1. Activate the virtual environment:

* Windows: venv\Scripts\activate
* Mac/Linux: source venv/bin/activate

1. Install dependencies:

pip install -r requirements.txt

**Running the Dashboard**

**Main Multi-Page Application (Recommended)**

streamlit run src/dashboard/main\_multipage\_app.py

**Individual Dashboard Themes**

# Corporate theme

streamlit run src/dashboard/dashboard\_corporate.py

# Modern theme

streamlit run src/dashboard/dashboard\_modern.py

# Vibrant theme

streamlit run src/dashboard/dashboard\_vibrant.py

**📊 Data Requirements**

The dashboard expects the following CSV files in data/processed/:

* clean\_vendors.csv - Vendor information and contracts
* clean\_projects.csv - Project details and status
* it\_effectiveness\_metrics.csv - IT performance metrics
* executive\_summary.csv - Executive summary data

Mock data is provided for testing purposes.

**🛠️ Development**

**Adding New Features**

1. Create new modules in the appropriate directory under src/
2. Update data processing scripts in src/data\_processing/
3. Add tests in src/tests/
4. Update documentation

**Running Tests**

python -m pytest src/tests/

**📈 HBCU-Specific Features**

The dashboard includes specialized modules for HBCU institutions:

* Grant compliance tracking and reporting
* Cost efficiency metrics tailored for smaller institutions
* Resource maximization strategies
* Student success ROI calculations

**🤝 Contributing**

1. Fork the repository
2. Create your feature branch (git checkout -b feature/AmazingFeature)
3. Commit your changes (git commit -m 'Add some AmazingFeature')
4. Push to the branch (git push origin feature/AmazingFeature)
5. Open a Pull Request

**📝 License**

This project is proprietary software developed for Paul Quinn College.

**👥 Contact**

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**🙏 Acknowledgments**

* Paul Quinn College IT Department
* Streamlit for the amazing dashboard framework
* The open-source community for various libraries used in this project