Student Portfolio Management System

Elevator Statement

For: academic program stakeholders (program accreditors, university, college, department, students, and employers)

Who: need insight into preparation of students by the academic program to be successful graduates

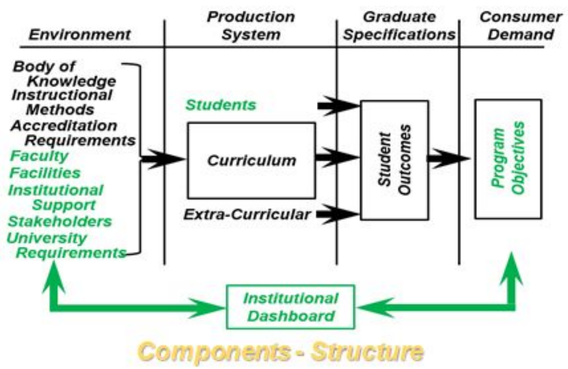
The: portfolio management system platform

Is: an academic tracking platform

That: allows current students and graduates to enhance their career by maintaining a professional competency portfolio

Unlike: other professional portfolio solutions

Our Solution: implements a portfolio with a stronger emphasis on the tracking of an academic programs' effectiveness as well as the individual's academic record to compliment their professional record.



Mockups

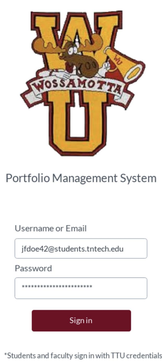


Figure 1. Login Page

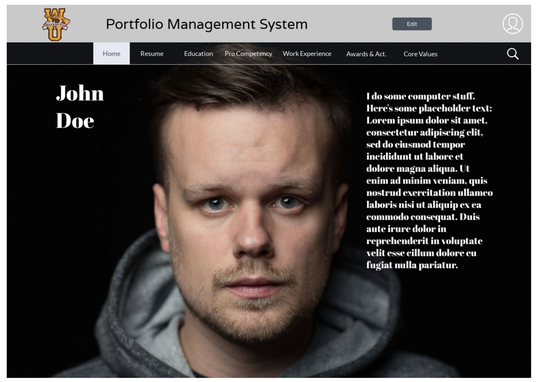


Figure 2. Portfolio Home Screen

Figure 3. Professional Competency Edit Screen

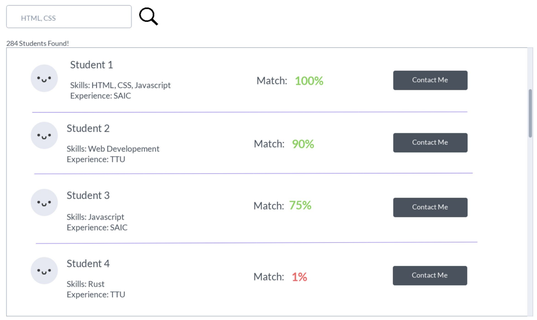


Figure 4. Search Results by Skill Set

Customer

This project develops a career focused portfolio system for an organizational platform design that is based on the W. Edwards Deming's System of Profound Knowledge (SPK) for students. The portfolio system extends program accountability embedded in the ABET General Criteria by compressing time to collect, summarize, and analyze academic program efficiency and effectiveness data and identifying at-risk students in a timely manner. This approach is easily extendable to science, technology, engineering, and mathematics (STEM) programs.

Program efficiency measures non-value added activities consuming academic program resources. In contrast, program effectiveness measures attainment levels of ABET defined Student Outcomes and Program Objectives. As shown in the figure on the left, Production System components of Students, Curriculum, and Extra-Curricular are designed to achieve Student Outcomes and Program Objectives. An SPK definition for each is:

1. Program Educational Objectives: Reflect Consumer Demand for program graduates.
2. Student Outcomes: Describe Graduate Specifications that include ABET Student Outcomes and any other specifications articulated by the program that ensure graduates are able to satisfy consumer demand.

A student instance in the portfolio includes resume, educational background, academic competencies, and work experience. For academic program assessment, portfolios may be queried by faculty and stakeholders charged with that responsibility. With student permission, their respective portfolio may be viewed by prospective employers and other students.

Key Features

- Ability to create and maintain a portfolio of academic competencies that reflect ABET Student Outcomes and Program Objectives.
- Easy access to a resume generator that uses drag and drop functionality to move academic competencies and work experience into predetermined resume templates.
- A menu of Bloom's taxonomy verbs to enhance student resume keywords.
- Enables academic advisors to create a student portfolio and log advising activities.
- Portfolio search capability for stakeholders to perform academic program assessment.
- Modularity to link with any an existing university network.
- Advanced privacy control settings.

Team Members

Joshua Vick - Developer, Front-End
Joshua Wilson - Developer, Cross-Compatibility
Kris Lin - Developer, Front-End
James Park - Developer, UI/UX designer, Back-End
Weston Smith - Developer, Search, Back-End
Reid Fuhrman - Developer, Front-End

David Elizandro, David Huddleston, Angelo Volpe, Brian Ledbetter, Tennessee Tech University, *A Systems Approach to Accredited Program Accountability in Regional Universities,* presented to the Industrial Engineering Division in the 2018 ASEE National Conference, June 2018, Salt Lake City, UT, (refereed).