

# William Stiller

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## Education

### **Penn State Erie, The Behrend College**

Digital Media, Arts, and Technology, Bachelor of Arts  
Data Visualization Minor, Human Factors Certificate  
National Society of Leadership and Success Member  
Pathway to Success: Summer Start Program

**December 2023**

(GPA 3.53)

Summer 2019

## Relevant Courses

### **Programming**

- Python Programming
- Text Encoding

### **Data Analysis**

- Data Analytics
- Text Analysis
- Statistics in Psychology
- Data Visualization

### **Communication**

- Technical Writing
- Write for the Web
- Multimedia Production

### **Research**

- Digital Project Design
- Psychology of Human Factors Engineering
- Engineering Psychology

## Projects

### **Enhancement of Hierarchical Data Parser Documentation**

**Fall 2023**

- Reorganized and revised documentation of a hierarchical data parser for clarity of processes taken
- Expanded upon the documentation to include insights such as digital thread application terms, purpose, and potential avenues for future development

### **Flannan Isles React Demo**

**Fall 2023**

- Designed a demo website describing fictionalized versions of the Flannan Islands, employing JavaScript and JSX with the React Library
- Employed NPM for package implementation, website deployment, and publishing

### **Insurance Firm's Digital Animation Implementation**

**Fall 2023**

- Led the engineering of a demonstration website prioritizing optimal Web Accessibility
- Assembled text-based SVG animations to establish dynamic multimedia elements
- Collaborated using Git to deliver technical and creative productions in a team coordinated effort

### **Hierarchical Data Parser**

**Summer 2023**

- Conducted research of MTConnect data items relevant to manufacturing systems for data collection
- Programmed a Python parser, transforming hierarchical XML data into an HDF5 file format
- Documented parser processes for continuity in data standard conversion efforts within digital thread applications

### **Stardew Valley Textual Analysis**

**Spring 2023**

- Produced a thorough text analysis of *Stardew Valley's* in-game dialogue via Python, XQuery, and the SaxonC library
- Led the cleanup of Character, Location, Event, and related Miscellaneous XML files
- Installed Python scripts to output topic modeling visualizations of character data

### **Champion Performance Analysis**

**Fall 2022**

- Analyzed tournament data to form a foundational character scoring system for school-sponsored competitive teams

- Compiled in-game character statistics and changes from public beta access into a comprehensive dataset
- Employed R for predictive analysis of future character scoring and to generate custom visualizations

#### **Founding of Penn State Behrend Archive**

**Fall 2022**

- Partner of interdisciplinary team responsible for developing, testing, and releasing a website utilizing XML, XPath, and XSLT
- Established version control and fostered collaborative teamwork through the use of Git
- Transcribed historical documents to provide search functions and create longitudinal records for Penn State

#### **Environmental Awareness Poster**

**Fall 2021**

- Studied design concepts and patterns of French Poster Designer, A.M. Cassandre
- Outlined, Illustrated, and revised several poster designs in Adobe Illustrator
- Advertised and promoted a specific environmental cause

#### **Visual Identity Design**

**Fall 2021**

- Conducted research on the Erie Maritime Museum and the historical background, addressing logo and website concerns
- Consulted advisors and identified representation that best suited the business
- Planned and redesigned the visual identity and elements of the museum in Adobe Illustrator

#### **Sideburn Branch Photo Collection**

**Spring 2021**

- Gathered information citing local fauna and flood protections of Fairfax County
- Photographed examples of improper barriers, advocating for better protections
- Awarded the Patricia Yahn Art Show Chancellors Award

#### **Lampshade Photogrammetry**

**Spring 2021**

- Experience in photogrammetry utilizing Meshroom to reconstruct photo samples
- Transformed graphical representations into 3D file formats
- Blender3D for post-production processing, editing, and final rendering

#### **Photoshop VR Photo Collection**

**Spring 2021**

- Compiled photographs into a 360-image using Adobe Photoshop's VR capabilities

### **Conference Presentations**

"Hierarchical Data Structure Development to Support Digital Thread and Digital Twin Applications," NIST Colloquium Series. Gaithersburg, MD, August 2023.

### **Work Experience**

#### **Summer Undergraduate Research Fellowship |**

**May 2023 – August 2023**

#### **National Institute of Standards and Technology (NIST)**

- Assessed data storage solutions for hierarchical data structures representing digital threads.
- Instituted use case of selected structure to represent data from product lifecycle stages.
- Programmed parsers to convert MTConnect XML data for digital thread applications.

#### **Lion Ambassador | Pennsylvania State University at Erie**

**Jan 2023 – Dec 2023**

- Actively supporting the School of Humanities and Social Sciences through community and on-campus outreach.
- Collaborated with other Schools and Ambassadors to showcase departments and programs to prospective undergraduate students.

#### **Web Developer | Pennsylvania State University at Erie**

**May 2022 – Dec 2022**

- Contributed to the development and revision of the Digital Media, Arts, and Technology program's student-run website
- Oversaw the accessibility and user experience of the site.

**Instructor Support | Digital Humanities Summer Institute****June 2022 – June 2022**

- Collaborated with an instructor in a one-week course aiming to provide XSLT and XML processing knowledge to PhD project teams.
- Discussed strategies for systematically building archives and databases with document processing and systematic encoding.
- Maintained a friendly and collegial environment for the benefit of attendees.

**Technical Skills****Coding Languages**

R, Python, JavaScript, JSX

XML, XSLT, XPath, HTML, CSS, XQuery

**Software**

IBM SPSS, RStudio, Tableau, MS Office

Git, GitHub, NPM, React, ThreeJS, Oxygen XML Editor

Adobe CC, Meshroom/AliceVision, Blender, 3ds Max, Unity

**Languages**

French – Professional Capacity

**Awards**

Patricia S. Yahn Art Show

Virginia FBLA Network Design

Fairfax FBLA Network Design

Chancellors Award, 2021

Fifth Place, 2019

First Place, 2019