William Stiller

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Education

Penn State Erie, The Behrend College   **December 2023**
Digital Media, Arts, and Technology, Bachelor of Arts   (GPA 3.53)
Data Visualization Minor, Human Factors Certificate
National Society of Leadership and Success Member
Pathway to Success: Summer Start Program   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

XML Parser Documentation Enhancement   **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 Company Digital Animation   **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 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 Site   **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

Website Design   **Summer 2021**
- Programmed and mapped a personal website for hosting current school projects using Git Repository
- Over the summer, revised site design to accommodate for a personal portfolio and projects

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
- Blendr3D 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 – Aug 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	Chancellors Award, 2021
Virginia FBLA Network Design	Fifth Place, 2019
Fairfax FBLA Network Design	First Place, 2019