Steven B. Egnaczyk

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The Ohio State University: College of Engineering **Columbus, OH**

B.S/M.S in Computer Science and Engineering - A.I Specialty *Expected Graduation May 2025*

- **Honors:** National Buckeye and Provost Scholarships (2020 - 2024); Dean's List 5 Semesters **GPA:** (3.61/4.0)
- **Relevant Coursework:** Data Structures and Algorithms, Discrete Mathematics, Software Development and Design, Advanced Statistical Analysis, Artificial Intelligence, Neural Networks, Computer Networking, Data Mining

PROFESSIONAL EXPERIENCE

Vanguard — *October 2023-Present*

Data Science/Machine Learning Contractor | A.I Garage Team

- Generated a stationary corpus of 60 stationary macroeconomic features by developing an internal API for publicly available economic data sources such as FRED-MD and BLS.
- Researched, constructed, and tested multiple neural network architectures to determine the best way to utilize lagged macroeconomic features to reweight the inputs of deep learning models.
- Utilized these experiments to test the viability of predicting housing turnover for mortgage-backed securities on a dataset consisting of over 1 billion loan-level data points.

Ab Initio — *June 2023 - August 2023*

Software Engineering Intern | MetaData Hub Team

- Updated MetaData Hub importer to extract information from various data sources such as Excel and Oracle RDBMS
- Implemented a file storage enhancement by enabling database storage, eliminating the need for a dedicated import server and allowing for on-demand imports, supporting the companies move towards cloud-based architecture
- Extended importer capabilities by adding support for data source connections such as S3, Sharepoint, and Git

The Ohio State University — *May 2022 - August 2022*

College of Material Sciences | Undergraduate Student Researcher

- Utilized Tensorflow and deep learning to account for crystallographic symmetries in synthetic microstructures
- Expanded the architecture of a Wasserstein Generative Adversarial Network to run on higher-dimensional data
- Developed a more efficient way of generating synthetic training data using Dream3D and Python, allowing for easy generation of 10,000+ unique slices of synthetic microstructures for use with the network

COMPUTER SCIENCE AND ENGINEERING PROJECTS

SpotifyGenie (Music Recommendation System) — *(Spotify API, React/Flask, Python)* *January 2024 - May 2024*

- Developed a user-focused music recommendation system, generating playlists based on user mood and preferences.
- Engineered a factorization similarity model using the 2.2 million songs contained within the Spotify Million Playlist Dataset to construct a playlist of songs that employ the same general mood of the users chosen playlist.
- Incorporated Genius lyric data as part of a sentiment analysis model that further refined song recommendations.
- Implemented a Flask-based backend to manage APIs, serve React pages, and handle data retrieval from Spotify API.

NullPointerException (Educational YouTube Channel) — *August 2019 - Present*

- Demonstrated advanced comprehension of computer science topics including data structures, sorting algorithms, and software engineering fundamentals through the curation of 50+ free lecture-style videos
- Collaborated with larger YouTube channels such as FreeCodeCamp to promote the content to a much larger audience
- Accumulated over 10 million total views across all platforms, working with channels topping 10 million+ subscribers

LEADERSHIP AND INVOLVEMENT

Triangle Fraternity — *April 2021 - Present*

President, Brotherhood Chair, Alumni Chair, Undergraduate Representative

- Lead and managed an executive team to hold philanthropy, brotherhood, social, professional, and educational events
- Served as a representative and liaison for our national organization, inter-fraternal council, and university
- Coordinated recruitment efforts to increase active membership by 50%, leading to largest chapter size in 30+ years
- Received 9 awards from the university including excellence in innovation and IFC chapter of the year, as well as national recognition for recruitment efforts, academic excellence, and internal chapter structure
- Additionally served as undergraduate representative for the fraternities national education foundation

SKILLS AND AWARDS

Technologies: Java, C, C++, Python, TensorFlow, Assembly, Linux, SQL, Bootstrap, Javascript, Solidworks, MATLAB
Awards: Eagle Scout (January 2018), FreeCodeCamp Top Contributor (January 2021)