Steven B. Egnaczyk

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

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, Artificial Intelligence, Neural Networks, High-Performance Deep/Machine Learning, Data Mining, Advanced OS

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 importance of features in a deep learning model.
- 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.
- Facilitated research through experimental designs, toulmin plots, and constant presentation to team members.

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.

LEADERSHIP AND INVOLVEMENT

The Ohio State University College of Engineering —   *May 2024 - Present*

Graduate Teaching Assistant, Lecturer

- Taught introductory computer science topics to 40 undergraduate students, managing the course materials, serving as the lecturer and lab manager, and overseeing two TAs in charge of assisting and grading assignments

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)