

Stuart Waller

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EDUCATION

Vanderbilt University
B.S. in Applied Mathematics & Cognitive Studies
GPA: 3.2/4.0

Nashville, TN
05/2023

Relevant Coursework: Multivariable Calculus, Differential Equations, Linear Algebra, Logic, Statistical Analysis, Scientific Computing, Computational Neuroscience, Computers & Ethics, Emerging Technology, Linguistics

Activities: VandyApps – VandyHacks – Writer for Strike Nashville

TECHNICAL SKILLS


Languages: Python | MATLAB | R | JavaScript | SQL
AI Frameworks: LangChain | Gradio | Transformers | PyTorch | TensorFlow
Data Analysis: pandas | NumPy | Matplotlib

EXPERIENCE

Solution Engineer Intern | Sigma Computing 08/2022 - 03/2023

- Developed a **Python** script to generate millions of rows of retail data within 10 minutes and prototyped a solution for migrating this data to the cloud within 1 hour
- Assisted the VP of Solution Engineering with multiple weekly managerial tasks
- Led the curation of professional infographics by collaborating with multiple teams across the organization
- Created and enhanced Solution Engineer documentation for the SE Department to utilize

Biomedical Informatics Research Intern | Vanderbilt University Medical Center 06/2021 - 08/2021

- Worked closely with Dr. Cosmin Bejan to derive clinical insight using machine learning (**ML**) and natural language processing (**NLP**) solutions
- Evaluated state-of-the-art large language models on extracting substance use information from clinical notes
- Abstract  presented at the **AMIA 2022 Informatics Summit** in Chicago, a preeminent conference in biomedical informatics

Machine Learning Research Assistant | Vanderbilt University 02/2021 - 03/2021

- Explored computer vision techniques for classifying objects in a large video dataset


PROJECTS

Spotify Chatbot  07/2023 - 09/2023

- Developed an AI that optimizes music selection by understanding users' moods and preferences
- Equipped a **large language model** (GPT-4) with Spotify's API using **LangChain** to fulfill complex user requests, including playback control, song explanations, personalized recommendations, and custom playlist curation
- Designed a **Gradio**-based user interface for intuitive and effective chatbot interaction

Personal Website  09/2023

- Created a website using HTML and CSS that provides an overview of my professional experience and interests

Visualizing Neural Networks  01/2021

- Animated a video entirely in Python on the fundamentals of neural networks and deep learning
- My channel also includes generative art and a showcase of the Spotify Chatbot