Grant Freeman Bowlds

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EDUCATION

Vanderbilt University   GPA : 3.8/4
Bachelor of Science in Computer Science and Mathematics   *Aug. 2018 – May 2022*

Zionsville Community High School   ACT: 36/36
Honors Diploma   *Aug. 2015 – Jun. 2018*

PROJECTS

Stratifying Neural Networks for CAVs   Summer 2020
Vanderbilt Institute for Software Integrated Systems   *Python, TensorFlow, Keras*
- Designed and completed a research project to evaluate the effects of stratification on neural networks for computer vision in autonomous vehicles. Authored a prepublication with models 5% more accurate than industry standard.
- Fulfilled criteria for an NSF grant while collaborating with researchers at the University of Oldenberg and Vanderbilt.

AI Driven Flashcarding   May. 2020 – Present
Notewardy   *NLP, NLTK, Node.js*
- Founding member and head back-end engineer for an EdTech startup and note management company.
- Responsible for creating an AI-driven flash card generator and self-testing software proven to be up to 10% effective than hand-written flashcards.

Visualizing Player Development   Dec 2019 – Present
Vanderbilt Baseball   *Seaborn, SQL, AWS*
- Creates data analyses and visualizations from over 10,000,000 data points in order to tell a story about progress to players and coaches.
- Ensures that both the technical team and the coaching team understands and appreciates the research and results.

Automating Outlier Removal for the TESS Mission   Fall 2020
Vanderbilt Physics and Astronomy   *SKLearn, NumPy, MatPlotLib*
- Implemented a combination of machine learning techniques and statistical methods to clean signals collected from the TESS spacecraft.
- Increased the efficiency of manual outlier removal by over 1,000 times.

LEADERSHIP

Lights on the Lawn | *Executive Vice President*   March 2019 – Present
- Lights on the Lawn is an annual charity concert that raises over $100,000 annually for domestic violence survivors.
- Transformed the logistics plan for the event from in-person to online in response to COVID-19 while increasing the projecting donation total

Pi Kappa Alpha | *Internal Vice President*   Jan. 2019 – Jan 2020
- Elected internal vice president for 2020 to lead the brotherhood, philanthropy, scholarship, history, and alumni relations committees for a chapter of 60 men.
- Directed Vanderbilt from a bottom 50% chapter to a top 25% chapter in less than 8 months.

TECHNICAL SKILLS AND COURSEWORK

Languages: C++, Python, Java, C, R, SQL, Racket, Prolog
Other Tools: Linux, Git, Node.js, Maya, Machine Learning, Computer Vision, Data Analysis
CS Courses: Graphics, Programming Languages, Operating Systems, Software Design, Data Structures, Cyber-Physical Systems, Digital Systems, Object Oriented Programming, Computer Ethics
Math Courses: Numerical Math, Graph Theory, Statistics, Differential Equations, Linear Algebra, Multivariable Calculus, Discrete Math