**Statement of Purpose**

I am applying to study as a graduate student of the UVA School of Data Science so that I can be a powerful collaborator in a company or team’s Data-Science process of defining a vision and requirements for a research project; exploring and organizing data, developing and applying models to represent or identify patterns in data, evaluating models, producing shared knowledge and life-improving software solutions, and communicating about this work. I want to master working with massive datasets, exploring and organizing data efficiently; understanding advanced statistics and multidimensional mathematics; and employing, designing, and developing state-of-the-art, high-performance methods, models, and tools that are ideal for various use cases.

I am passionate about studying the architecture, suitability, and applications of neural networks; developing project design documentation and software as a member of a team; and employing and developing models for computer vision. I feel aligned with the work of Dr. Bill Basener; I am considering developing an application employing a neural network for classifying and identifying relatively small objects in a larger urban environment based on aerial imagery based on LiDaR data. I have conviction that such an application could aid in understanding urban demographic trends, urban planning, and developing healthy community. I am fascinated by signal generation and decoding, deriving meaning from signals, and developing applications that interweave signal information. I love working to clearly communicate technical information; I would be a valuable contributor to accessible academic writing as well as a valuable teaching assistant and undergraduate mentor.

I have significant experience with data exploration, analysis, technical writing, project management, and object-oriented software development. I have experience with collaborating with a team to develop understanding, useful products, and computer infrastructure. For Elder Research, I architected and co-developed a web application, based on a server and a database, for detecting anomalous computer usage. I serve as a Junior Software Developer with Blue Ridge Software Solutions, where I develop an API for developing web applications, develop a music-literacy application, and develop a domestic appliance employing computer vision. I have developed a server that listens for HTTP requests from a client and provides responses with database information; a client that requests weather information from OpenWeatherMap; Little\_YOLOv4 and proprietary software to leverage functionality of the darknet deep-learning framework; a C# application for drawing bounding boxes around objects in images; neural-network-based classifiers and detectors; applications to manipulate audio and other signals; and a suite of explanatory documentation. I study Computer Science, Deep Learning, Engineering, Mathematics, and Physics.

In the next five years, I plan to continue to live in Charlottesville and work as a Data Scientist with a company like Elder Research or Commonwealth Computer Research. I feel excited about working to actualize the vision and goals of clients for projects; to understand clients’ existing data and modeling tools; and to develop data infrastructure, software solutions, and actionable insights.

**Addendum regarding Negative Aspects of Application**

I profoundly regret some of the short-sighted choices I made when studying at William & Mary, such as failing to drop one of my series of jazz-piano lessons. I humbly request that my junior / senior records, acquired after taking a gap year to volunteer as an Assistant Teacher at Emlen Elementary School in inner-city Philadelphia and to mature, be considered in lieu of all records of my study at William & Mary. I would be more than happy to continue to ace undergraduate-level courses to demonstrate my commitment to, readiness for, and experience with studying Data Science at the graduate level.

**Word Counts**

The Statement of Purpose has 476 words, including title.

The Addendum has 108 words, including title.