Samuel Chapman

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To the Hiring Manager:

I believe I am an excellent candidate for the *ARPA-H Senior AI/ML Support* position at Amentum. Over the past 15 years in academia and industry I have gained extensive experience in the relevant skills, such as **Machine Learning and AI**, **Programming**, **Data Visualization**, **Statistical Modeling,** **Technical Writing**, and **working with federal and private-sector clients**. I also have a strong proficiency for the **Research Process** and extensive experience in **Teaching** and **Mentoring**.

I am passionate about **Data Science** and **Research**, and the accompanying opportunities for solving interesting problems. In graduate school, I used a system of evolving logic circuits in an **Image Recognition** **Machine Learning** task, and in my PhD, I extended the input/output system to **Bioinformatics**, to a Protein Structure Prediction problem. In addition, my last job at Booz Allen included many projects that used techniques such as **Data Engineering**; **Machine Learning** using **COTS Tools**, **Python coding, Supervised and Unsupervised Learning, NLP, and Statistics**; **Data Visualization**; the use of a **GPU Cluster**, and **Technical Writing**. My skills are accompanied by a general work philosophy of keeping up-to-date with research, not being afraid to try new (or old) solutions as needed, and understanding that interpretation of results greatly impacts the eventual solution.

I have also played a **major role in several projects**. In one, I used **Machine Learning** such as **Deep Learning** and **Anomaly Detection** on the problem of malicious network traffic detection in large datasets, **advising other team members** as well. In other work, I was the key driver for a **Data Analysis** and **Machine Learning** project. Here, I created a large dataset from **OSINT** news articles to infer information about and to predict world events using **NLP** (*e.g.* **Named Entity Recognition, Topic Modeling, and Sentiment Analysis**), **Regression**, **Network Algorithms**, and **Data Visualization,** developing an **end-to-end pipeline** for the operations. I was eventually **promoted at the** firm in recognition of my contributions and abilities. Furthermore, I have served as the **career manager** for another employee at the firm.

I also want to emphasize the **importance of good communication and clear Technical Writing** in reports, e-mails, and project resources such as **Confluence** and **Github**. When communicating to clients, I anticipate what they need and how to present it based on their understanding of the work. This paid off in a presentation I gave to a client in my malicious network traffic project, focusing not just on our methods used, but helping them to easily understand its purposes and results, such as using **Data Visualization** and **Scoring Metrics**. My effort ended up being **key in enhancing our contract with them**. My communication skills are also reflected in my **Mentorship** to more than 10 people at Booz Allen on technical and career matters.

In summary, I believe my experience, skills, and passion would be valuable because I not only perform the work needed, but continue to learn and gain experience. I believe I can make meaningful contributions to Amentum, and am looking forward to speaking with you further.

Sincerely, Samuel Chapman