GOODS AND SERVICES TAX NETWORK
(A Government Enterprise)

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August 14, 2024

LETTER OF RECOMMENDATION

To the Admissions Committee,

Mr. Aryamann Tomar joined the BIFA (Business Intelligence and Fraud Analytics) Department of GSTN in July 2023 as a Software Engineer. During his tenure with us, he demonstrated exceptional capabilities, potential, and skills while working on various tasks and projects, fulfilling his professional responsibilities with dedication. As he now seeks to pursue a master's program to further enhance his skills and competitiveness in the professional realm, I am pleased to endorse his application.

Although he began with us as a fresher equipped with strong foundational knowledge, he quickly advanced his understanding in the field of Artificial Intelligence. He accomplished this by learning and implementing various Machine Learning (ML) and Deep Learning (DL) models, thereby making significant contributions to the organization's ongoing projects. Additionally, he has been instrumental in generating new Proof of Concepts (POCs) as well as revamping the existing ones, showcasing his innovative thinking and technical expertise.

In his first project at GSTN, he tackled the challenge of optimizing the saving time of the taxpayer's network of the entire nation. Before his involvement, the system only provided network information for individual taxpayers, limiting users to isolated views and preventing comprehensive analysis. By building an algorithm to save the networks of all 15 million taxpayers, he enabled a holistic perspective that allows for detailed comparison, enhanced insights into connections and patterns, and improved decision-making. The old code which was implemented in Java required at least 4 days to compute the network for all taxpayers in a given financial year. Aryamann developed an algorithm that leveraged vectorization to utilize parallel computing and multithreading in the CPU, reducing the computation time to less than 2 hours. The network was visualized using the Neo4J graph database and VisJs.

The development of this algorithm played a crucial role in the Cancellation Project, which aimed to enhance the efficacy of tax officers in processing taxpayer's applications. Using the algorithm developed in the previous project, network parameters were created for every taxpayer from 2017 to 2023. He constructed, preprocessed, and fine-tuned the dataset before running ML algorithms on it, thereby gaining a comprehensive view of the entire workflow pipeline. Aryamann's contributions were pivotal in enhancing our fraud detection capabilities and significantly contributed to the growth of the organization.

Aryamann has also worked with the E-Invoice team on developing a Mobile Application Project focused on text-based HSN Code Retrieval. He developed the core functionality using advanced NLP techniques, including training a custom model to fetch enteries based on ANNOY indexing. This involved preprocessing text data, extracting features, and optimizing the retrieval process to ensure efficient and accurate code suggestions based on user queries. His contributions significantly enhanced the app's ability to provide precise HSN code recommendations.

At the forefront of our efforts to reform and streamline taxation processes, Aryamann's strong skills and enthusiasm have helped revolutionize data processing, improved tax collection accuracy, and enhanced the overall efficiency of tax administration. At your institute, he will be able to further develop his talents and become capable of working on higher levels under the guidance of subject matter experts. Hence, I am thrilled to recommend him.

Please feel free to reach out if you need further information regarding Aryamann's candidacy.

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