

LETTER OF RECOMMENDATION

It is with great pleasure that I recommend Aryan Bali for the Master's program. I have had the privilege of knowing Aryan for the past two years as a student in the Department of Computational Intelligence at SRM Institute of Science and Technology. I have served as his project guide and research supervisor on two of his most significant and technically demanding projects. In this capacity, I have witnessed his development from a bright student into a capable and insightful young engineer with a clear passion for building complex, intelligent systems.

Aryan first took on a highly complex challenge under my supervision with his Multi-Metaheuristic AI Framework for Smart Grid Load Balancing. This project highlighted his aptitude for theoretical AI concepts and his ability to apply them to solve difficult optimization problems. He successfully developed a multi-stage optimization pipeline, demonstrating a sophisticated understanding of how to sequence distinct algorithms Ant Colony Optimization, Simulated Annealing, and Particle Swarm Optimization to progressively refine a solution. Furthermore, his integration of a Deep Q-Network (DQN) agent to enable adaptive learning showed significant initiative. This project confirmed his ability to handle not just large datasets, but also high levels of algorithmic complexity.

Building on this experience, Aryan distinguished himself further during his work on a Real-Time PPE Compliance and Safety Monitoring System. This was not a simple classification task; Aryan was instrumental in architecting a complete, multi-modal AI pipeline. He demonstrated a remarkable ability to integrate diverse modules, including a YOLOv9-based detection system, a fire detection module, and an Eigenfaces-based system for facial recognition. His methodical approach to the MLOps lifecycle, from curating a custom dataset of over 12,000 images, showcased an engineering maturity well beyond his years. The system's high performance, achieving a mean Average Precision (mAP) of 91.3%, is a direct testament to his technical rigour and dedication.

What has consistently impressed me about Aryan is his intellectual curiosity and methodical approach to challenges. He is not a student who waits for answers; he is a proactive problem-solver who independently researches solutions and is not deterred by setbacks. During our projects, I observed his resilience in debugging complex code and his patience in testing multiple approaches to find the most optimal solution. This independence is balanced with a strong collaborative spirit, and he has always been a receptive and valuable member of the team.

In conclusion, Aryan Bali has my highest recommendation. His hands-on experience in engineering data-intensive systems, combined with his strong grasp of AI theory and his proven initiative, makes him an ideal candidate for the demanding and systems-focused curriculum. He has the technical foundation and the intellectual maturity to excel in your program and contribute meaningfully to his cohort.

Please feel free to contact me if you require any further information.

Sincerely,


Dr S Rajalakshmi

Assistant Professor
Department of Computational Intelligence
SRM Institute of Science and Technology
Kattankulathur-603203
Email: rajalaks6@srmist.edu.in
Phone: +91-8124431185

