HARSH SAGAR
harsh.sagar2107@gmail.com
Indian Institute of Technology Madras
+916352010302

14th February, 2024

Monash University,
Australia

Hello,

I am Harsh Sagar, 5th year Biological Sciences student at IIT Madras. I wish to apply for Research Assistant position at Monash University. I had worked on Detection of Milk Adulterant using ML Techniques project for Summer Research Internship, IIT Bhubaneshwar. Analysed milk properties such as foamability, foam stability, foam height etc as the demand for Cappuccino foams has increased. Used Grid search cv for hyperparameter tuning on Random forest classifier, which increased test accuracy to 88.1% from 81.7% also increased roc auc score to 0.953771 from 0.946013. This work also got published as research paper in Springer publications.

Worked on the classification of the gene expression of endometrial biopsies as a data science intern at Supratech Lab, Gujarat. To select the genes involved in endometrial receptivity to be included in the ERA, the gene ontology terms with a P value less than .025 were considered significant. For the endometrial receptivity transcriptomic signature, two different comparisons were made, the first was the differential expression of R versus P and E and the second was that of P versus E in the ERA. These statistically significant genes were isolated during the Window of Implantation. Used Grid Search CV for hyper parameter tuning of XGBoost model for prediction.

Working on these internships I have developed extensive knowledge and expertise in the field and gained valuable experience in various aspects of research work. Moreover, my previous roles have helped me to develop and significantly improve my attention to detail and accuracy and gave me a chance to see and feel what it's like to be a part of a deadline-driven and fast-paced business environment. In addition to my experience, I can offer your firm excellent analytical skills and important multitasking and time management abilities. Not only they are necessary for the job but also serve as an evidence of a data-driven mindset which I believe I possess.

I am genuinely excited about the opportunity to join the Sivathamboo Group as a Research Assistant at Monash University for several reasons. Firstly, the focus of the research aligns closely with my academic background and interests. Conducting research related to sudden unexpected death in epilepsy (SUDEP) and autonomic function in epilepsy presents a unique opportunity to contribute to advancing our understanding of these critical areas in neurology. As someone passionate about leveraging data-driven approaches to address complex scientific questions, I am eager to immerse myself in the cutting-edge research conducted by the Sivathamboo Group.

Secondly, the collaborative and dynamic environment at Monash University appeals to me. Being part of a team of dedicated researchers and scientists who are committed to making meaningful contributions to the field of epilepsy research is incredibly inspiring. I look forward to collaborating with experts in the field, learning from their expertise, and contributing my skills and knowledge to the team's collective efforts.

Over and above, I am a good team player also I have ability to compromise, listen to my teammates and always passionate to learn from my seniors.