**Q. Why did you select this topic for your research?**

**A.**

1. **Personal interest:** I have personal interest in the field of medical image analysis and machine learning. This topic provides an opportunity to explore the intersection of these fields and contribute to the advancement of medical technology.
2. **Societal impact:** Malaria is a significant public health concern in many parts of the world, particularly in developing countries. My research in developing an accurate and efficient method for malaria detection could have a significant impact on the lives of people who are affected by this disease.
3. **Research gap:** There is still a lot of scope for improvement in malaria detection methods. My research can contribute to filling this research gap and provide a better alternative to existing methods.
4. **Academic relevance:** This topic aligns with my academic interests and background in computer science, machine learning, or medical imaging. I see this as an opportunity to apply my skills and knowledge in these areas to a real-world problem.
5. **Career prospects:** I see this topic as a way to develop expertise in a rapidly growing field and increase your career prospects in medical imaging or AI-based healthcare.

**Q. Research variable you used ?**

**A.**

1. **Independent variable:** FC convolutional layers, ResNet, DenseNet, SVM, NASNetMobil, Our Proposed CNN, PCR, RDTs, image normalization, cropping ,resizing, size training data set, The hyperparameters of CNN model(learning rate, number of epochs )
2. **Dependent Variable:** Accuracy/performance, Loss Function.
3. **Control variable:** Balanced data set , Quality of blood smear images for training and testing

**Q. Scope of the research or study ?**

**A.** CNN architecture. (CNN proposed by you)

Q. Significance of my research ?

A .

1. Improved accuracy of malaria diagnosis
2. Cost effective
3. Potential for automation and scalability
4. Contribution to the field of AI-based healthcare

Q. Supporting your finding what areas :

A. performance metrics , Comparison with existing methods, Experiment and analysis

Q. Briefly explain what is your research all about ?

A.

This research involve developing a computer-aided diagnosis system for malaria detection using deep learning techniques, specifically Convolutional Neural Networks (CNNs). The goal is to create an accurate, efficient, and cost-effective system that can detect malaria from thick and thin blood smear images efficiently.

The research involve acquiring and preprocessing a large dataset of thick and thin blood smear images. The dataset is used to train and evaluate a CNN-based malaria detection system. The performance of the system is evaluated using various metrics such as AUC score, specificity, precision, recall, and F1 score.

The research would also involve comparing the performance of the CNN-based malaria detection system with existing methods of malaria diagnosis such as microscopy or rapid diagnostic tests. The potential practical applications of the system would be discussed, along with the limitations and challenges of implementing it in real-world scenarios.

Overall, this research aims to develop an effective and efficient malaria detection system that can potentially benefit millions of people worldwide, particularly in resource-limited settings where traditional methods of diagnosis may be difficult to access.