MIT-ADT UNIVERSITY
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MIT SCHOOL OF COMPUTING

Class : TY AIA 1
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Early detection of Parkinson's disease using machine learning

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What User Says

●User expresses concerns about their motor skills: "I've noticed some changes in my movements lately. My voice sounds different, and my walking doesn't feel as steady."

●User seeks information: "I wonder if these symptoms could be related to Parkinson's disease. I need to find out more about it."

What User Thinks

●User considers possible causes: "Maybe it's just stress or aging, but it's better to be sure. Parkinson's disease crossed my mind, and I want to explore that possibility."

●User contemplates seeking medical help: "I should consult a doctor. Early detection could make a big difference in managing the condition, if that's indeed what's happening."

What User Does

●User researches: Searches online for information about Parkinson's disease, its symptoms, and available diagnostic methods.

●User schedules a medical appointment: Makes an appointment with a healthcare professional to discuss their concerns and undergo potential tests.

What User Feels

- User feels anxious: Experiences anxiety about the uncertainty of their symptoms and the potential implications for their health.
- User hopes for a positive outcome: Holds onto hope that their symptoms are not indicative of a serious condition like Parkinson's disease.

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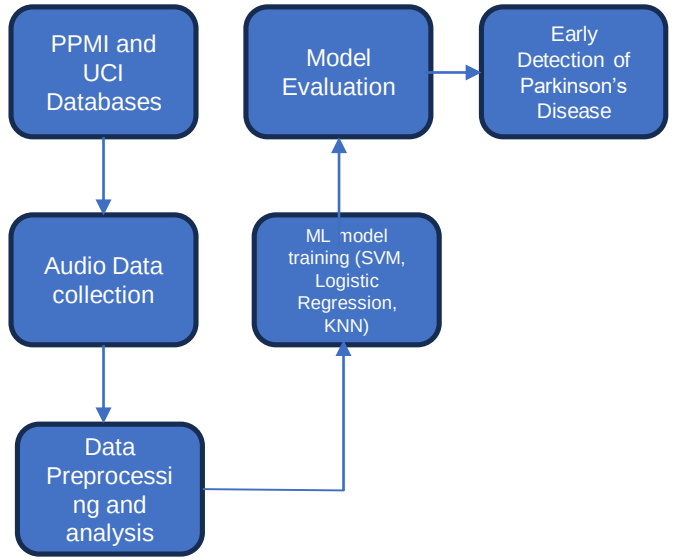
SR NO	Requirement	Solutions
1.	**Data Collection And Preprocessing :-**	
	Available Solutions-Existing Research Models	Proposed Solution-Develop an ensemble model that combines multiple algorithms' outputs.
2.	**Wearable Devices :-**	
	Available Solutions-Some wearable devices are already used to monitor movement and collect data. They can provide valuable inputs for early detection models.	Proposed Solution-Gather a comprehensive dataset from wearable devices, voice recordings, and medical imaging sources.

Proposed Architecture/Diagram:



Our System will help users to **manage and provide assistance in their day-to-day tasks as well as do basic functions** autonomously like information gathering, making calls, surfing the web, setting alarm and reminder as well as answer queries of the users. Apart from this, our system will provide the user with a **smooth transition into the urban lifestyle by guiding them through initial phases of changes** and helping them throughout their lifetime.

Project Timeline: One Year, Split into Two Semesters

1. **Setup & Basic Tasks:** Handle requests, process queries, execute tasks.
2. **AI Voice:** Develop advanced voice interactions.
3. **Authentication:** Implement facial/voice recognition for security.
4. **Smart Home:** Connect with smart home devices.
5. **Integration:** Bring all modules together for a complete app.

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