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A PROJECT REPORT ON

**“DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT”**

Submitted in the partial fulfilment for the award of

**BACHELOR OF TECHNOLOGY**

**in**

**ROBOTICS AND AUTOMATION**

**Submitted by**

**CHINMAYAGOUDA PATIL 2VX20RA004**

**DIVYA L HEGDE 2VX20RA005**

**SANNIDHI J 2VX20RA010**

**YOGESH BADIGER 2VX20RA012**

**SUMANT MALAJI 2VX21RA408**

**Under the Guidance of**

**Dr. Anil Pol**

Assistant Professor

Department of Mechanical Engineering, VTU, Belagavi-590018

**2023-2024**



****

**DECLARATION**

I, **CHINMAYAGOUDA PATIL**, bearing **USN: 2VX20RA004**, a student of the eighth semester B.Tech in Robotics and Automation at Visvesvaraya Technological University, Belgaum, hereby declare that this dissertation entitled “**DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT**” embodies the report of my project completed in the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi during the final semester under the guidance **of Dr. Anil Pol, Asst. Professor, Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

Place**:** Belagavi CHINMAYAGOUDA PATIL

Date: 2VX20RA004



****

**DECLARATION**

I, **SANNIDHI J**, bearing **USN: 2VX20RA010**, a student of the eighth semester B.Tech in Robotics and Automation at Visvesvaraya Technological University, Belgaum, hereby declare that this dissertation entitled “**DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT**” embodies the report of my project completed in the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi during the final semester under the guidance **of Dr. Anil Pol, Asst. Professor, Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

Place**:** Belagavi SANNIDHI J

Date: 2VX20RA010



****

**DECLARATION**

I, **SUMANT MALAJI**, bearing **USN: 2VX21RA408**, a student of the eighth semester B.Tech in Robotics and Automation at Visvesvaraya Technological University, Belgaum, hereby declare that this dissertation entitled “**DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT**” embodies the report of my project completed in the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi during the final semester under the guidance **of Dr. Anil Pol, Asst. Professor, Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

Place**:** Belagavi SUMANT MALAJI

Date: 2VX21RA408



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**DECLARATION**

I, **DIVYA L HEGDE**, bearing **USN: 2VX20RA005**, a student of the eighth semester B.Tech in Robotics and Automation at Visvesvaraya Technological University, Belgaum, hereby declare that this dissertation entitled “**DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT**” embodies the report of my project completed in the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi during the final semester under the guidance **of Dr. Anil Pol, Asst. Professor, Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

Place**:** Belagavi DIVYA L HEGDE

Date: 2VX20RA005



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**DECLARATION**

I, **YOGESH BADIGER**, bearing **USN: 2VX20RA012**, a student of the eighth semester B.Tech in Robotics and Automation at Visvesvaraya Technological University, Belgaum, hereby declare that this dissertation entitled “**DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID SERVICE ROBOT**” embodies the report of my project completed in the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi during the final semester under the guidance **of Dr. Anil Pol, Asst. Professor, Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

Place**:** Belagavi YOGESH BADIGER

Date: 2VX20RA012



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**DECLARATION**

We, the students of eighth semester B-Tech Robotics and Automation, Visvesvaraya Technological University, Belgaum, hereby declare that this project report entitled **“DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID ROBOT”** embodies the details of our project completed at the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama," Belagavi, under the guidance of **Dr. Anil Pol, Professor of the Department of Mechanical Engineering**, **Visvesvaraya Technological University, Belagavi.** This report is submitted in partial fulfillment of the award of Bachelor of Technology in Robotics and Automation at Visvesvaraya Technological University, Belagavi, during the academic year 2023–24.

**CHINMAYAGOUDA PATIL 2VX20RA004**

**DIVYA L HEGDE 2VX20RA005**

**SANNIDHI J 2VX20RA010**

**YOGESH BADIGER 2VX20RA012**

**SUMANT MALAJI 2VX21RA408**

Place: Belagavi

Date:



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**DEPARTMENT OF MECHANICAL ENGINEERING**

**CERTIFICATE**

This is to certify that the project (18RAP83) work titled **“DESIGN AND DEVELOPMENT OF VERSATILE HUMANOID ROBOT”** is a bonafide work completed by **Mr. CHINMAYAGOUDA PATIL** bearing **USN: 2VX20RA004**, a student of the Department of Mechanical Engineering, Visvesvaraya Technological University, “Jnana Sangama,” Belagavi, in partial fulfillment of the requirements for the award of Bachelor of Technology in Robotics and Automation of Visvesvaraya Technological University Belagavi during the academic year 2023–24. It is certified that all the corrections or suggestions have been approved as they satisfy the academic requirements concerning the project work prescribed by VTU, Belagavi, for the said degree.

Name of the Examiners:

1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Dr. Anil Pol**

2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Guide



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**CHINMAYAGOUDA PATIL 2VX20RA004**

**DIVYA L HEGDE 2VX20RA005**

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Name of the Examiners:

1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Dr. Anil Pol** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Guide



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