

## Design of a Collapsible Rain Protection Kit for Motorbike User



**N. Sarathchandra**

Sarathchandra29@gmail.com  
Ph. No: 0 90364 26921

<b>Student's Name</b>	<b>N. Sarathchandra</b>	<b>PD (PT-2011)</b>
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<b>Academic Supervisor(s)</b>	B. Rajatesh Nath and Srinivasa
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<b>Industrial Supervisor(s)</b>	
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**Keywords:** Rain Protection Kit, Motorbike, Collapsible

**Abstract:**

Motorbike is one of the most used vehicles in India because of this cost, size and flexibility. It is used by lower middle class, middle class and upper middle class and higher class people depending upon the mode of usage. Mostly working professionals, students and business men use motorbikes for office going, collage going and business purpose respectively.

While riding motorbike, user is most exposed to environmental elements like sun heat, rain, fog, dust etc. Rain is most difficult environmental element to face while riding on motorbike. As present design of motorbikes in Indian market does not protect user from environmental elements especially from rain. It is very discomfort to get drenched in rain while riding motorbike. Getting drenched in rain while driving motorbike causes health problem for user and makes user very uneasy after reaching the destinations like office, collages as the user will be in full wet condition. Presently people use rain coat for the same problem, but the problem occurs when user does not have rain coat readily available when required like when rain starts suddenly in the middle of the journey. So the protecting the user from getting drench in rain is essential in any point of time. Literature survey, a lot of patents has been taken reference to understand the design concepts for the same problem. Ethnography study, user interviews has been conducted to get exact problems and the requirements. Concepts have been generated by focusing on customer requirements which derived from QFD and PDS. Final concept has been selected by using decision matrix.

A complete 1:1 working prototype has been manufactured for the selected concept and validated the product. The product has been modified to solve the issues observed in first validation. And product has been validated again and feedback collected from the users after modification.



**Prototype**