

LIST OF FIGURES

Figure I-1. Belmawa competition dashboard FRI.....	2
Figure II-1. Phases of waterfall model.....	13
Figure III-1. Conceptual model.....	25
Figure III-2. Systematics of problem solving	26
Figure IV-1. FRI existing belmawa competition dashboard.....	35
Figure IV-2. Use case diagram.....	37
Figure IV-3. FRI belmawa competition raw data	40
Figure IV-4. Data before filtered	42
Figure IV-5. Data after filtered	42
Figure IV-6. System architecture	43
Figure IV-7. Low fidelity main page	45
Figure IV-8. Low fidelity dashboard	47
Figure IV-9. Low fidelity chatbot	48
Figure IV-10. High-fidelity design	49
Figure IV-11. Activity diagram 1: registration & role assignment.....	50
Figure IV-12. Activity diagram 2 (authentication & role-based redirect)	51
Figure IV-13. Activity diagram 3 (user dashboard access).....	52
Figure IV-14. Activity diagram 4 (admin dashboard access)	53
Figure IV-15. Activity diagram 5 (competition type selection).....	54
Figure IV-16. Activity diagram 6 (chatbot interaction).....	55
Figure IV-17. Activity diagram 7 (crud operations)	56
Figure IV-18. Sequence diagram user view dashboard	57
Figure IV-19. Sequence diagram admin view dashboard	58
Figure IV-20. Sequence diagram admin input new competition data.....	59
Figure IV-21. Sequence diagram admin view and manage competition data.....	61
Figure IV-22. Sequence diagram admin interaction with chatbot	63
Figure IV-23. System integration architecture.....	65
Figure IV-24. Database schema	68
Figure IV-25. Belmawa competition dashboard rebuild results	70
Figure IV-26. Flowise chatbot flow	73
Figure IV-27. 2025 student participation predict result.....	75

Figure IV-28. Laravel structure.....	78
Figure IV-29. Laravel controllers	79
Figure IV-30. Laravel models	80
Figure IV-31. Blade page competition dashboard	80
Figure IV-32. Middleware structure	82
Figure IV-33. .env configuration	83
Figure IV-34. web.php configuration.....	84
Figure IV-35. Belmawa competition dashboard blade	85
Figure IV-36. Frontend display of competition dashboard website.....	86
Figure IV-37. Frontend display of user competition dashboard	88
Figure IV-38. Looker dashboard embed code.....	89
Figure IV-39. Flowise chatbot embed code	89
Figure V-1. Welcome page	90
Figure V-2. Register choice page.....	91
Figure V-3. Login page	92
Figure V-4. User register page	93
Figure V-5. Admin register page	94
Figure V-6. Competition choice page	95
Figure V-7. Admin dashboard page	96
Figure V-8. Chatbot interaction dashboard.....	97
Figure V-9. Add new data competition page	98
Figure V-10. View all competition data page	99
Figure V-11. Edit competition data page	100
Figure V-12. Delete data confirmation	101
Figure V-13. Dashboard user page.....	102
Figure V-14. Chatbot answer with predictive insights.....	103
Figure V-15. Authentication testing result.....	109
Figure V-16. Admin dashboard access test results	109
Figure V-17. User dashboard access test results.....	110
Figure V-18. CRUD feature test results	110
Figure V-19. Chatbot interaction & session persistence test results.....	111