Business Requirements Document (BRD)

Project Title: AI-Powered Auto Insurance Platform

Client: YAYOBE Auto Insurance Company

1. Business Needs

YAYOBE Insurance Company is seeking to improve the accuracy, efficiency, and personalization of its auto insurance pricing and underwriting processes. Current manual methods are time-consuming, inconsistent, and lack personalized offerings for customers.

Business Drivers:

- Rising customer expectations for faster and more personalized services
- Operational inefficiencies in manual underwriting
- Need to remain competitive in a technology-driven market
- Increased demand for digital self-service capabilities

Proposed Solution: Implementation of an AI-powered system, including a machine learning model that supports dynamic pricing, personalized recommendations, and automation of key processes.

2. Project Goals

The primary goal is to build and integrate an AI system that streamlines policy management and enhances customer experience.

Objectives:

- Deliver personalized policy recommendations based on customer risk profiles
- Enable automated notifications and reminders for renewals, payments, and policy updates
- Improve decision accuracy and operational efficiency by automating underwriting based on risk scoring

Additional Goals:

- Reduce policy approval time
- Ensure compliance with insurance regulations
- Increase customer acquisition and retention

3. Functional Requirements

The system must support the following functions:

3.1 Customer Input Interface:

- Capture Personal Information (Name, DOB, Address, Contact Info)
- Capture Vehicle Information (Make, Model, Year, VIN)
- Capture Driving History (License status, violations)

- Capture Accident and Claim History

3.2 Coverage Discovery:

- Liability
- Comprehensive
- Collision
- Uninsured/Underinsured
- Medical Payments
- Rental Reimbursement
- Roadside Assistance

3.3 Pricing Engine:

The AI dynamically calculates fair premium rates based on user data, real-time risk evaluation, and actuarial models.

3.4 Underwriting Support:

- Automatically flags high-risk applicants
- Suggests acceptance/rejection/conditional approvals
- Stores audit logs for underwriting decisions

3.5 Policy Management:

- Allow customers to view, update, renew, and cancel policies online
- Generate downloadable documents (quotes, policy contracts, receipts)

4. Non-functional Requirements

Performance:

- System response time < 2 seconds for most interactions
- Login should complete in < 30 seconds

Security:

- All customer data must be encrypted (in transit and at rest)
- Must comply with data protection regulations (e.g., HIPAA, GDPR, CCPA)
- Role-based access control for internal users

Scalability:

- System should support growth in customer base and data volume

Usability:

- Responsive UI for desktop, tablet, and mobile
- Self-service portal for customers

Reliability and Availability:

- 99.9% uptime
- Automated backups and disaster recovery

Integration:

- Compatible with third-party systems such as DMV databases, credit bureaus, and payment gateways

5. Success Metrics

To evaluate the success of the AI-powered system, the following KPIs will be measured:

- Model accuracy of ≥90% in pricing and risk evaluation
- Average time reduced by at least 50%
- 70% reduction in manual underwriting tasks
- Target customer satisfaction (CSAT) score ≥ 85%
- At least 15% increase in quote-to-policy conversion
- 100% compliance with regulatory audits