Financial Trading Automation Solutions

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INTRODUCTION

The Financial Trading Automation Solutions project is the creation of automated financial trading strategies. The client trades currencies on the Foreign Exchange Market (FOREX) through the trading platform MetaTrader 5. He uses automated trading robots, known as Expert Advisors (EAs), to perform trades based on his trading strategies that he has developed though manual trading and observations. Historically, the client has outsourced the creation of his EAs to overseas developers due to an unavailability of MQL5 (the programming language required to automate financial trading on the MetaTrader 5 platform) developers in New Zealand. Outsourcing has resulted in problems. Different time zones and language barriers have resulted in the misunderstanding of requirements, increased development times, higher costs, and lower quality EAs providing our project team with an opportunity.

Financial Trading Automation Solutions serves two purposes. The first is automating two of the client's financial trading strategies by creating two EAs to a professional standard. The second and uniquely important purpose is offering a local development experience for the client to circumvent the problems encountered through outsourcing overseas

DEVELOPMENT

The team began the project with gathering requirements from the client. The client's requirements gave insight to the previous development issues he had faced. Understanding the full context of the problem allowed the project team to move forward with planning.

The selection of methodology for the project was analysed and chosen to meet the client's needs and served as the backbone for the schedule planning. The chosen methodology, Rapid Application Development, involved prototyping. Prototypes allowed the client to review his financial trading strategies and introduce new functionality to increase their validity. The review process helped mould the systems to ensure the client's requirements, of both the systems and development experience, were met.

The team developed two prototypes for each system where functional requirements could be expanded upon or refined with the client's needs before completing the final deliverable. A Linear

Regression indicator was created to enable trading. Unit testing and system testing were performed at the prototype handover stages ensuring a coverage of quality throughout development.

After the development of the systems, accompanying deliverable documentation including the System Manual and User Manual were developed to serve as a source of knowledge to help support and maintain the systems beyond the conclusion of this project.

CONCLUSION

Overall, the project was successfully completed on time with the client's system requirements and development experience requirements being met. The client was happy with the Expert Advisors and their accuracy in automating his financial trading strategies. The project included unique challenges which served as growth for the project team.