CHAPTER 11

CONCLUSION

In the field of software engineering (Ebert et al 2008; Hillegersberg & Herrera 2007; Hussey & Hall 2008; Prikladnicki & Yamaguti 2004) common issues that affect software project schedules are cultural difference, high number of distributes sites, different knowledge expertise, and domains, many communication dependencies, time zero differences. Traditional methods required a lot of manpower and critical time. Further earlier approaches lack quantitative method that takes into account of variability and complex nature of software engineering.

It is well known that the future of software engineering, production or issues lies in automation. Although it is at infancy stage, the present study contributes a lot towards this issue. Each chapter of the thesis has a contribution. The contributions are listed below and the listing shows how efficiently the automation can be achieved using Code generation, GP and machine Learning.

11.1 CONTRIBUTION

- A routine to generate code from design
- A method for generic form generation
- An algorithm that helps to rank the pages automatically (Link rank generator).
- Generative programming in networking – idea is proposed.
Real time code generation model is formulated and relational data set is developed to support and to store the algorithm in an intuitive phase and a search algorithm has been devised that works on this collection to give appropriate algorithm as output from which code can be generated.

The study and findings showed that intelligent domain selection would lead to high degree of resemblance and vote level. Further, lower the DoG (s), higher the reusability.

Applications of machine learning techniques for work-force modularization, followed by cost prediction, requirement engineering and finally for the maintenance phase are proposed which provides clarity and precision than manual process.

The performance of logistic regression with regularization is compared against neural networks with back propagation in risk identification. The analytical results show neural networks with back propagation is with better precision.

A formula is obtained which is collaborative, content based and time variant. This promises to provide more accurate result on code on component reusability for developers.

11.2 FUTURE WORK

This study has more scope to proceed with in the future and implement in the real time situation. Some of the scopes for future works are listed below.
• Real time code generation model proposed has a lot of modules to be integrated and to be completed. The future work of this thesis will be to implement the entire model.

• The solution proposed for the improvement of error correction in network is analysed using simulation and it can be tested in real time.

• The proposed solutions using ML for SE can be tested in the industrial setup and each proposal can become a topic of in depth result.