Article Review: ‘**Artificial Intelligence Techniques in Software Engineering for Automated Software Reuse and Design**’

*Note: Abbreviations used in below article are:*

*SE – Software Engineering*

*AI- Artificial Intelligence*

As software grows, its complexity also increases with the time as well as the cost to create and overall maintenance of the code. To solve the various problems in Software Engineering tasks, variety of artificial intelligence techniques can be applied to Software Development Life Cycle (SDLC) in order to achieve automation of software design and its reusability.

***Significance of AI in the field of software engineering****:* Mining of high volume of data generated from different phases of SDLCprovidessoftware metrics like Cyclomatic Complexity, Depth of Inheritance Tree, NOC Number of Children, LOC Code and Comments etc. These metrics help code quality verification for organizational standards. In addition to that, data generated plays a key role in identifying the potential reusable component and takes whole software architecture and design patterns to reuse. Knowledge based systems are amalgamation of AI and Business intelligence with SE, considered as capable auto decision making systems. Business Intelligence in SE leads to intelligent automation of software industry.

***Construction of intelligent and reusable software with the help of AI techniques:*** Automated software construction is amalgam of artificial intelligence techniques with software engineering and data mining. Mining of software engineering data will help in extracting useful knowledge for identification and selection of potential candidates for reuse and the consolidation of artificial intelligence techniques will aid in employing intelligence to the component selection process. The potential components for reuse are carefully selected even adapted/extended as per requirement, trend and technologies, integrated with other bug free components to build high quality software. This will lead to automation of the entire software engineering activities with software reuse.

***Major AI techniques and Analysis*:** Even though AI techniques like knowledge based systems, fuzzy logic, neural networks, machine learning, data mining have been explored as way to improve many of SE activities, the article under review provides a tabular analysis for only data mining, machine learning and neural networks techniques along with area of usage in SE sphere and their applications. Some of the major area of usage being software modelling, reuse, evaluation etc.

***Conclusion*:** The integration of artificial intelligence with data mining for supporting software engineering applications leads to Software Intelligence, enhancing automated software reuse for software development. An analysis of several AI techniques in SE provides insight on software reuse domain of software engineering.

***ACM Reference Information*:**

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