

Who can help me with this source code change?

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An approach to recommend a ranked list of developers to assist in performing software changes to a particular file is presented. The ranking is based on change expertise, experience, and contributions of developers, as derived from the analysis of the previous commits involving the specific file in question. The commits are obtained from a software systems version control repositories (e.g., Subversion). The basic premise is that a developer who has substantially contributed changes to specific files in the past is likely to best assist for their current or future change. Evaluation of the approach on a number of open source systems such as koffice, Apache httpd, and GNU gcc is also presented. The results show that the accuracy of the correctly recommended developers is between 43% and 82%. New developers to a long-lived software project, or project managers, can use this approach to assist them in undertaking maintenance tasks, e.g., bug fix or adding a new feature. The approach can be realized as a plug-in to development environments such as Eclipse.

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