

SOURCEGEN: MOBILE RESPONSIVE SOURCE CODE GENERATOR

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Abstract

As with the continuous rise in smartphone penetration worldwide, the use of mobile phones to perform tasks and browse through the internet are at a continuous rise. This causes more and more businesses to consider the decision of optimizing their web sites and web applications to become more mobile responsive. It is important to have a device responsive site because more people are likely to visit a site from their smart devices due to the increased convenience. With mobile responsive sites becoming more crucial it is important to make the process of optimizing websites more efficient. When considering the developers who develop websites that must do this for multiple UI depending on the device the website is being viewed in, it is thought that a more efficient, time saving process would be preferred.

This is where SourceGen comes into play - a front-end MVC framework which will be open source and that can be used to generate the mobile responsive source code upon providing the desktop source code. In addition, the framework also provides additional features such as minifying the code to ensure the overall performance is optimized to work faster and quickly responsive. For this, an Open AI model was built containing approaches used in existing products and research to generate source codes and an algorithm was implemented to carry out the device responsive source code.

Once implemented the framework was further tested and evaluated by domain experts and potential users who further supported the need for such a front-end framework and confirmed that the project deliverables were successfully completed.

Key words: MVC Framework, frontend framework, device responsive, minification, responsive source code, source code generation, OpenAI GPT-3,