Robocode: Gamified Service for Learning How to Code

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A web app for anyone who's trying to learn how to code, from beginning to advanced, while building a robot by successfully completing respective tasks.

Team: Coding Robots

Contact details

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Solution Details

Solution description

Robocode is a service that gives a visually assisted platform for learning best coding practices in a certain programming language. It's a game-ified solution that gives learners the opportunity to learn new practices and complete assignments on coding while getting rewarded for their efforts. At its core, the game aspect of the service is players building their own robot with items gained through successfully completing tasks and tests. Together with individual items, players also receive completion points for progression, and achievements for extraordinary performance.

Solution context

Our solution aims to address several problems. Firstly, learning coding is hard when you don't have a visual aspect to it. Learners find it hard to study when they don't see explicit results of their work.

The above problem is made worse by the fear of some learners to study something that is high in volume, such as best practices in code. Another problem is learners not completing the courses they take because of difficulties with motivation. Lastly, some learners just don't know that there are best practices in code they need to learn to be effective in a production environment.

Solution target group

Our target audience are undergraduate students and anyone who wants to learn best practices in code.

Solution impact

Learners who use our service to study get a unique opportunity to learn best coding practices, and train those they already know. The visual aspect of the app is a motivational tool that keeps the learner engaged and encourages completion.

Solution tweet text

Web app for anyone who's trying to learn how to code while building a robot by successfully completing assignments on coding.

Solution innovativeness

By design, our innovation is inherent to the core product idea – the usage of visual graphics to support gamified learning in programming.

Solution transferability

The solution we developed can be applied to learning best practices and tricks in various programming languages (other than Javascript).

Solution sustainability

There are many ways this app can be developed in the future to improve on the already implemented base functions. Firstly, a quest and world system can be implemented, where the robot a student builds through successfully completing assignments sets out on an adventure through an action-packed environment. Successful completion of even more and highly advanced programming assignments will allow the player character to progress. Secondly, more courses can be implemented, in other programming languages. Thirdly, the base functions make possible an ecosystem where learners would be able to compete against each other, also through successfully completing coding assignments. And lastly, the current idea of gaining items can benefit from giving additional features to the items, like in an RPG for a more game-ified experience.

Solution team work

Our individual skills complimented each other well, and we all worked as one to bring our idea to life.