Identifying Technical Debt with Sonar

Software Engineering 2 – Workshop #8

SOftEng
http://softeng.polito.it

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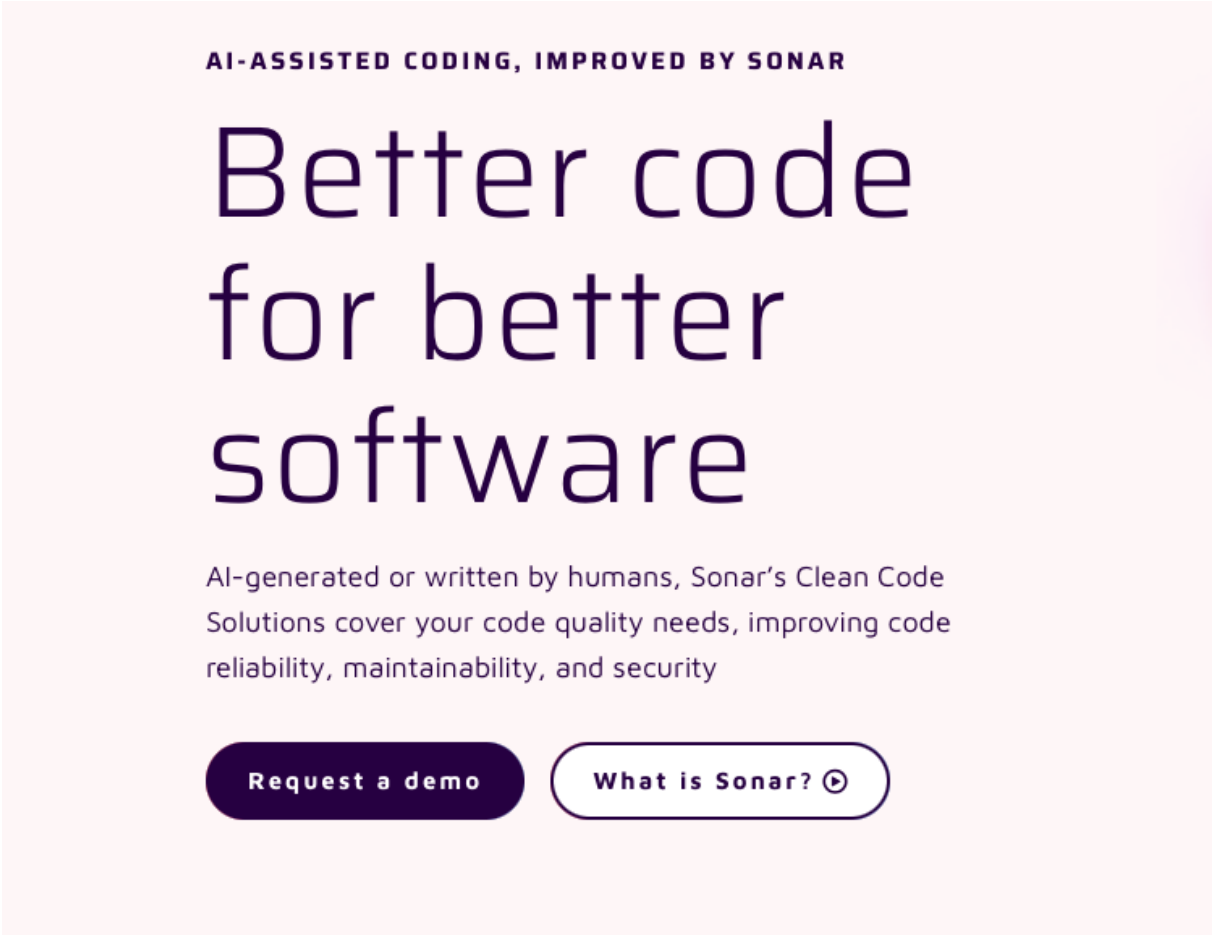
CHECK-IN

http://tiny.cc/W8-TD

Sonar



SonarQube cloud

Formerly SonarCloud

Cloud-based static analysis tool for your CI/CD workflows

SonarQube server

Formerly SonarQube

Self-managed static analysis tool for continuous codebase inspection

SonarQube ide

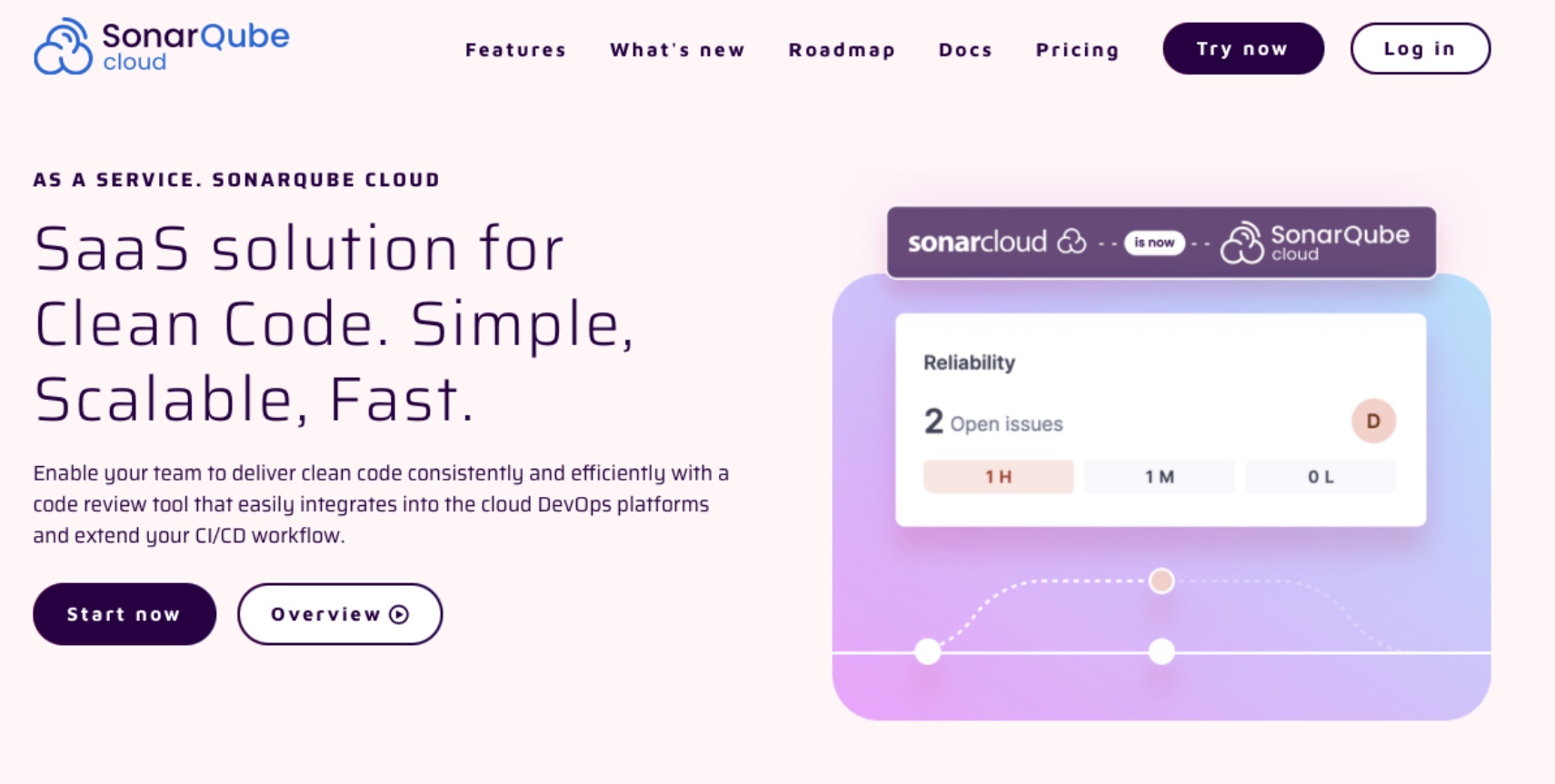
Formerly SonarLint

Free IDE extension that provides on-the-fly analysis and coding guidance

https://www.sonarsource.com/

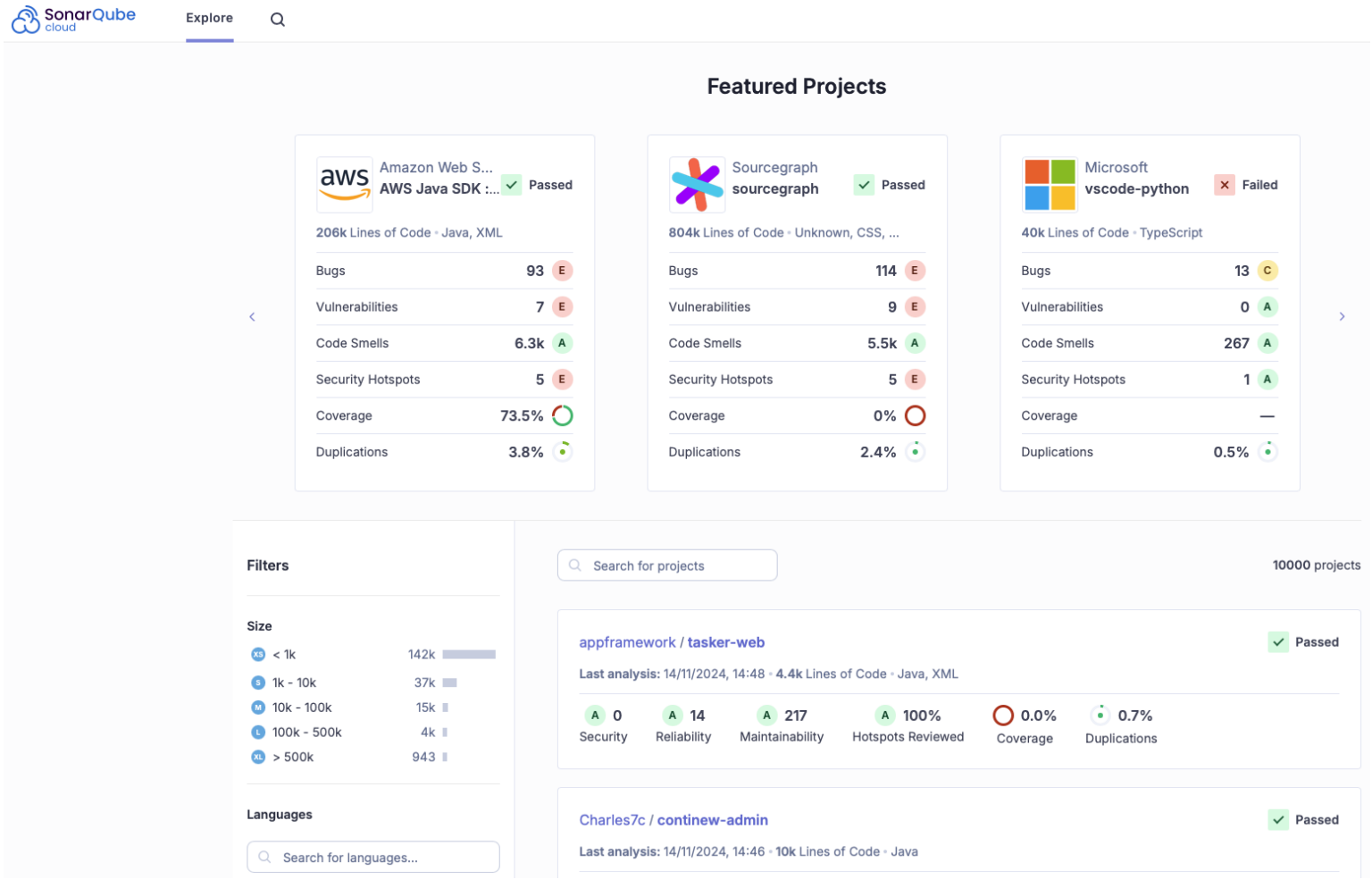
Supported languages

SonarQube cloud



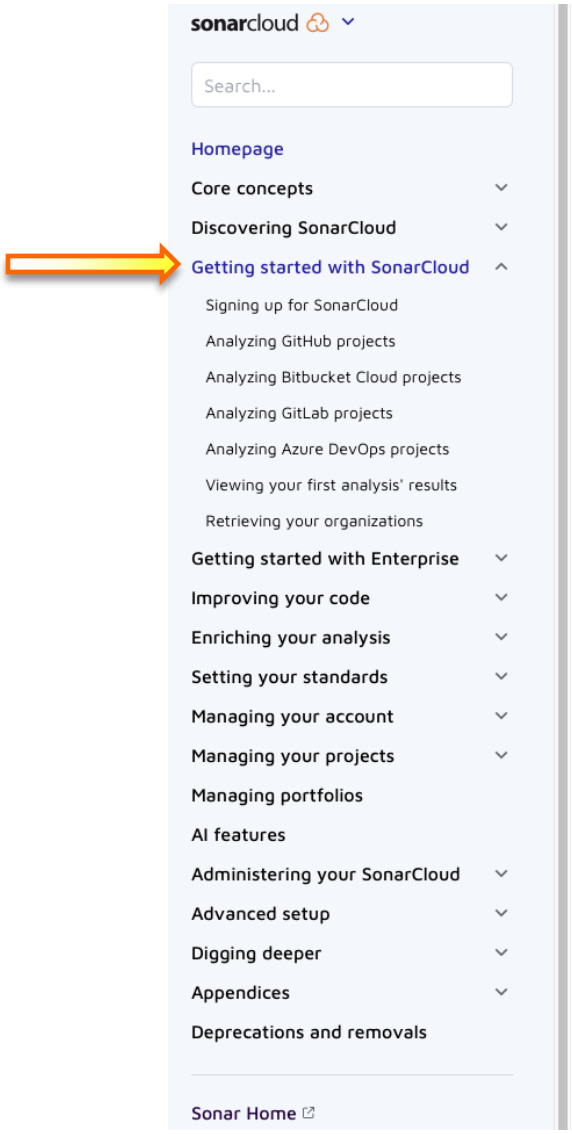
https://www.sonarsource.com/products/sonarcloud/

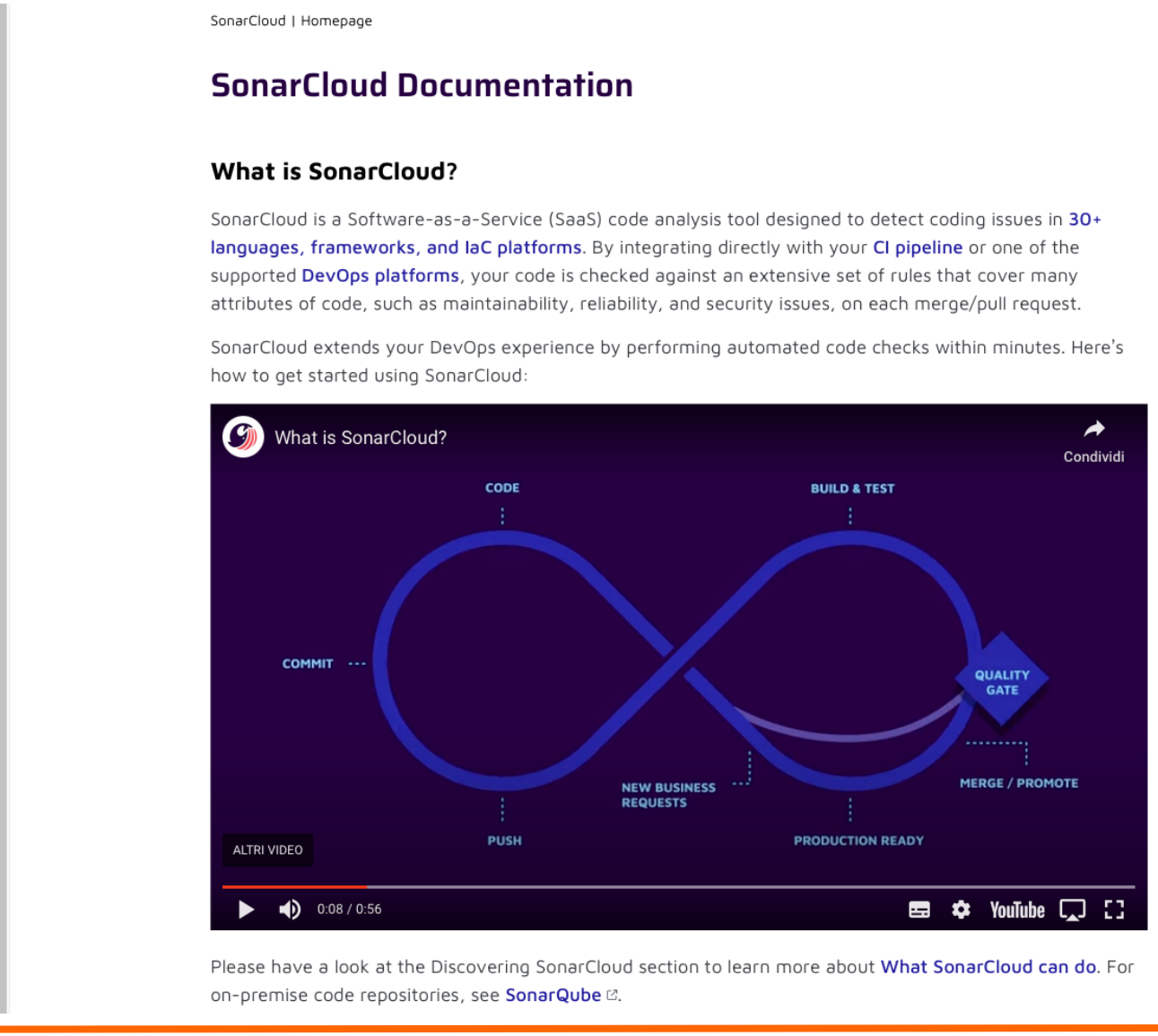
You can explore existing open analyses



https://sonarcloud.io/explore/projects?sort=-analysis_date

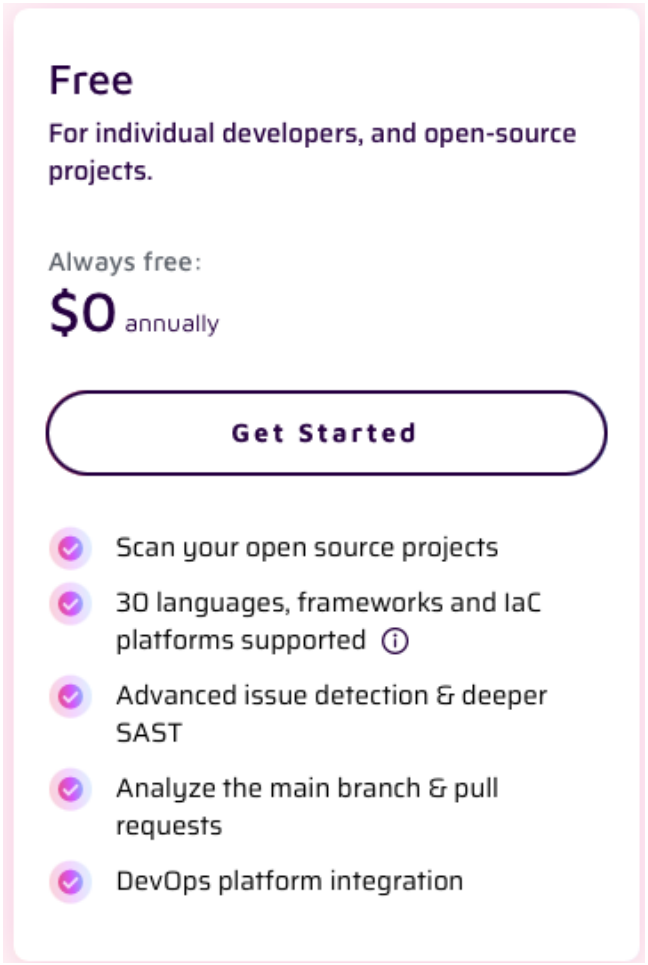
Sonar cloud documentation





Analyze GitHub projects with SonarQube Cloud

SonarQube cloud – free



https://www.sonarsource.com/products/sonarcloud/

Free for public projects

Free plan

If you want to analyze only **public projects** in your organization, you can use the free, open-source plan. This plan allows you to import and analyze an unlimited number of public projects in your organization. When using the free plan, your code and analysis results will be publicly accessible.

ⓘ Any private repository in that organization will not be importable.

Anyone, including anonymous users, can view a free plan organization record. Non-members cannot see the organization's list of members.

https://docs.sonarsource.com/sonarcloud/administering-sonarcloud/managing-subscription/subscription-plans/

Getting started with GitHub

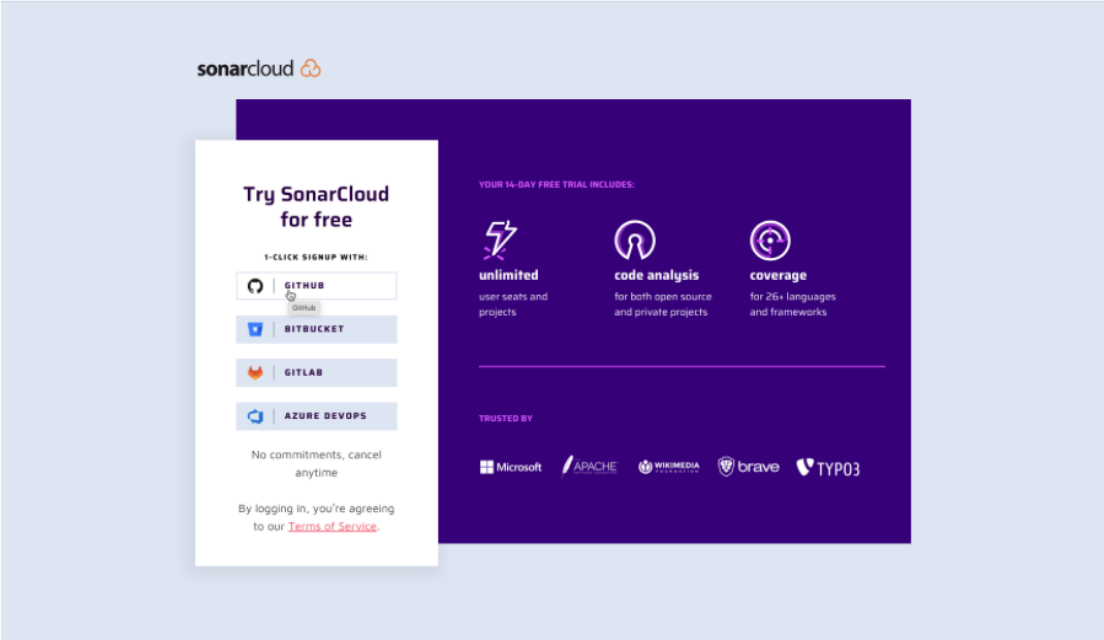
sonarcloud

Search...

Homepage
Core concepts
Discovering SonarCloud
Getting started with SonarCloud
Signing up for SonarCloud
Analyzing GitHub projects
Analyzing Bitbucket Cloud projects
Analyzing GitLab projects
Analyzing Azure DevOps projects
Viewing your first analysis' results
Retrieving your organizations
Getting started with Enterprise
Improving your code
Enriching your analysis
Setting your standards
Managing your account
Managing your projects
Managing portfolios
AI features
Administering your SonarCloud
Advanced setup
Digging deeper
Appendices

Getting started with GitHub

If your code is on GitHub, go to the SonarCloud product page and choose **Sign up** for new users, or **Login** for existing users, then select **GitHub** from the list of DevOps cloud platforms.



Welcome to SonarCloud

Once you have successfully logged in, you will see the SonarCloud welcome screen. Select **Analyze your first projects** > **Import an organization from GitHub**.

Instructions for Sonar+GitHub

- Follow the instructions at the dedicated page on the SonarQube Cloud documentation:
  - https://docs.sonarsource.com/sonarcloud/getting-started/github/

Tests and code coverage

SonarCloud | Enriching your analysis | Test coverage | Overview

Test coverage

Test coverage reports and test execution reports are important metrics in assessing the quality of your code. Test coverage reports tell you what percentage of your code is covered by your test cases. Test execution reports tell you which tests have been run and their results.

⚠ SonarCloud itself does not calculate coverage. To include coverage results in your analysis, you must set up a third-party coverage tool and configure SonarCloud to import the results produced by that tool (see below). This feature is only available for **CI-based analysis**. It is not available for automatic analysis.

https://docs.sonarcloud.io/enriching/test-coverage/overview/

Overview - live

https://sonarcloud.io/explore/projects?sort=-analysis_date

Hands on

Premise: SE1 projects

Each group has at least a member who did a project in the SE1 course

Previous years SE1 projects

https://git-softeng.polito.it/se-2023-24/group-ita-XX/ezelectronics

https://git-softeng.polito.it/se-2023-24/group-eng-XX/ezelectronics

https://git-softeng.polito.it/se-2022/group-XX/EzWh

https://git-softeng.polito.it/se-2021/group-XX/ezshop

TASKS

1. Two SonarCloud analysis (automatic OR ci-based)
   a. on one project from SE1:
      - download it and re-upload it on Github as open project
   b. on the Office Queue Management code

2. Planning TD management: discuss and decide
   a) how to include code quality checks within your sprint activities
   b) how to pay back TD (e.g. priorities, workflow, internal organization, etc.)
   c) Document your decisions on GitHub on a file named TD_strategy.md (on the root of the MAIN branch), by Sprint 3

3. Update http://tiny.cc/SE2-2024-teams-repo