



# Simplify Coding Instruction with Web-Based IDEs: Accessible, Secure, and Time-Saving Tools for Every Classroom

Anthony Barba / 26' CSTA Impact Fellow / June 15th / 9:45 am





# **What!** A session on Web-Based IDE's... ... will it be worth my time?

## **Session Goals:**

- Learn how JuiceMind's free web-based IDE can streamline program development and grading, including free AI tools!
- Explore strategies for maintaining academic integrity and accessibility.
- Walk away with tools and classroom practices to make CS instruction more efficient and equitable.



# Welcome and



...

Primarily a teacher at ...



... in Yakima, WA  
but also ...



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## CSTA IMPACT Fellowship



# Disclaimer: I do not work for...

 JuiceMind

But I  the platform!



# This is my Classroom



# This is my Family



# This is my Summer Plan



# Framing the Problem ...

**Software IDEs in a classroom introduce challenges:**

- **Often too complex for beginners**
- **Over-dependence on features like autocompletion**
- **Plagiarism/AI-generated code concerns**
- **Compatibility issues with classroom management platforms**
- **Students may not have access to software at home**
- **Teachers often depend on their IT department for technical issues**



# What I want in a web-based IDE ...

Easy to Grade! Plagiarism Tools

LMS Integration Comment on Code

Multiple CS Languages Accessibility

GUI Capability AI Teacher Tools



# The best solution I have found is ...



Online IDE | Quizzes | Coding Curriculum

A screenshot of the JuiceMind online IDE interface. At the top, there are buttons for "Template", "Solution", "Tests", and "Settings". A red button labeled "Generate with AI" is also visible. The main area is a code editor with a dark background, showing a Java file named "MyDatabase.java". The code includes imports, a class definition, and a main method with comments and code for data, logic, and output. A "History" button is at the bottom left of the editor.

```
1 import java.util.Scanner;
2
3 public class MyDatabase
4 {
5     public static void main(String[] args)
6     {
7         // --- THE DATA BRICKS ---
8         // Use your worksheet to fill these in with your topic!
9         String[] names = {};
10        String[] details = {};
11        String[] images = {};
12
13        MyDatabase obj = new MyDatabase();
14
15        // --- THE LOGIC ---
16        // Goal: How will your program pick which item to show?
17        // Requirement: Use at least one math operator and one variable.
18
19        int index = // YOUR LOGIC HERE;
20
21        // --- THE OUTPUT ---
22        System.out.println("Selection: " + names[index]);
23        System.out.println("Info: " + details[index]);
24        obj.printHTMLImage(images[index]);
```



# In this session we will:

- Explore the JuiceMind IDE and other platform features
- Apply CS Practices in Real-Time
- Navigate Student Coding Development w/Feedback
  - Live demo of automated grading and test case setup
  - Show AI-detection, version-tracking, and instant feedback systems
  - Discuss how this promotes equitable, scalable feedback for large classrooms
- Model Pedagogical Strategies and Classroom Implementation

