

# SOFTWARE ENGINEERING of STUDIO TOOLS:



Team Health Reports: Badge Status Report && Badge Progress Timeline

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## Capstone Goals:

- Utilize Azure DevOps data extraction API to showcase work status and progress timeline
- Develop a web application capable of displaying badge reports
- Construct an intuitive and user-friendly interface
- Ensure the front-end offers a responsive, dynamic experience tailored for students

## Project Background:

- **ADO (Azure DevOps):** is a development tools from Microsoft used by instructors and students at to manage project in CSS390
- **Studio Tools:** is a web technologies to streamline educational processes.

## Motivation:

Reduce time spend to generate accurate and consistent reports

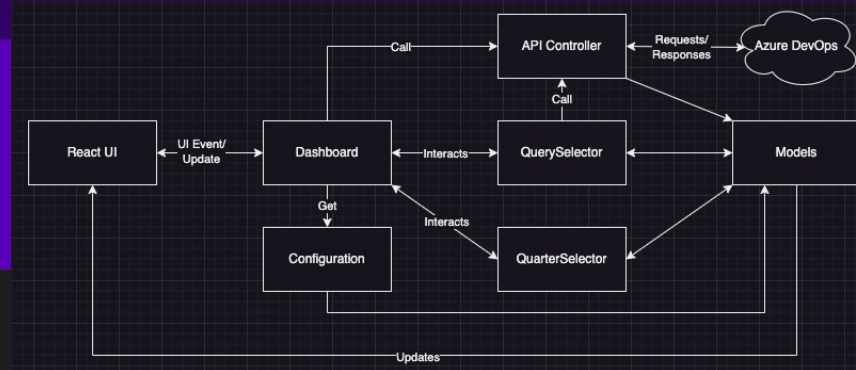
## Challenges:

- Little experience with HTML, JavaScript, CSS, React, and associated libraries
- Transition in architecture led to a shift in the codebase language from backend to frontend
- Encountered issues with insufficient student data

## Achievements:

- Solid codebase included comments and TDD tests
- Designed and build UI

## How Studio Tools Work >>



## Tools:



```
<Container maxWidth="lg">
  <Box my=(4) >

    <Box display="inline" alignItems="center">
      <Typography align="left" variant="h6" fontWeight="bold" >
        Select Quarter:
      </Typography>
      <QuarterSelector onChange={loadSelectedQuarter} quarters={quarters} />
    </Box>

    <Box display="inline" alignItems="center" marginBottom=(2) width="(100)">
      <Typography align="left" variant="h6" fontWeight="bold" >
        Select Team:
      </Typography>
      <QuerySelector setWorkItems={setWorkItems} onChange={hideTable} onReady={showTable} />
    </Box>

    <Grid item xs=(12) sm=(6)>
      {isLoading && <TaskManager workItems={workItems} badges={badges} setBadges={setBadges} sprintQuarter={sprintQuarter}/>}
    </Grid>

    <Grid item xs=(12) sm=(6)>
      <TeamHealthDashboard studentBadges={badges} yearAndSeason={yearAndSeason} sprintQuarter={sprintQuarter} />
    </Grid>
  </Box>
</Container>
```

## << Code Snippet

## Take Away and Experience

- Set up a React environment and integrated Azure DevOps REST API for dataset acquisition and display
- Implemented TDD (Test-Driven Development) practices for validating data accuracy
- Innovated and developed various ideas to meet project requirements
- Worked closely with another developer for project development and problem-solving