**Senior Project Weekly Status Report**

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**Project Title:** Mutest

**Project Description:**

Design and implement a tool that introduces controlled mutations into Python source code and reports a mutation to evaluate the effectiveness of the test suite.

**Technologies Used:**

Git, GitHub, pytest, AST (Abstract Syntax Trees).

Programming Language**:** Python.

**GitHub URL:** <https://github.com/vinniciuscastro/Senior-Project>

**Week 4: 10/11/25**

Overall Status (on-schedule, behind, ahead): Behind

Number of hours worked this week: 8 hours

Total number of hours worked on the project thus far: 26 hours

Number of total hours anticipated at completion: 103 hours

Accomplishments: This week I dove more into the AST going to resources like [AST python library](https://docs.python.org/3/library/ast.html) documentation , [video class](https://www.youtube.com/watch?v=ulJm7_aTiQM) about compiler, and also explore MutPy documentation and usability. I started a prototype but nothing

Challenges: My biggest challenge this week was personal life demands and a coding assessment for different companies (and preparation for it).

Plans / Goals for next week: Finish the prototype and test it.

SPED Talk Insight (Briefly describe an insight or something interesting you learned from the SPED talks this week): This week I watched Julieta White about Argon2 (a password hashing algorithm). I found it interesting how Argon2 has 3 variants: Argon2d (data-dependent memory access), Argon2i (data-independent memory access), and Argon2id (Hybrid approach).

Other comments for the instructor: