

## **Justification for Computational Thinking**

As the world increasingly leans on data-driven insights, the need for a workforce skilled in both the topics of data science and the foundational logic that underpins it is essential. The "Computational Thinking" course, proposed as a core component of the BS in Data Science curriculum at Florida International University (FIU), is instrumental in fulfilling this need. It focused on the cognitive and logical processes that are important to computer science and data analysis. Beyond mere programming or data manipulation, computational thinking fosters a structured and logical approach to problem-solving. This course introduces students to concepts like abstraction, decomposition, and algorithmic design, laying the groundwork for understanding how to methodically tackle and dissect challenges. The emphasis on propositional logic, ethical considerations, and computational creativity ensures that students not only become adept problem solvers but also responsible and innovative contributors to the tech industry. Introducing a course like "Computational Thinking" into the curriculum aligns perfectly with FIU's mission to produce students who can decompose a problem, that can think critically, dissect complexities, and propose innovate solutions in the rapidly evolving data landscape.