# Solution Architecture

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| Team ID | LTVIP2025TMID48379 |
| Project Name | **Student Health and Lifestyle Analysis** |

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

* Find the best tech solution to solve existing business problems.
* Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
* Define features, development phases, and solution requirements.
* Provide specifications according to which the solution is defined, managed, and delivered.

## Solution Architecture Overview

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| Component | Description |
| Data Source | Federated student lifestyle survey data source, including demographic, nutritional, and physical activity variables. |
| ETL/Data Preparation | Cleansing and transforming data within Tableau using calculated fields and mappings (e.g., gender and employment normalization). |
| Visualization Layer | Tableau dashboards analyzing GPA vs lifestyle, comfort food preferences, meal habits, etc. |
| Users | University wellness officers, educators, student affairs administrators accessing visual insights. |
| Deployment | Workbooks hosted on Tableau Server/Public with secure access controls. |

## Reference:

https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/