

Exploring Early Stage Cost-Estimation Methods Using Off-the-Shelf Tools: A Preliminary Study

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Abstract Cost analysis is challenging for multiple reasons, one of which is the lack of historical data due to proprietary issues, or significant work required to make it useful for a particular application and domain of interest. In addition, to support system engineering methods such as Design Space Exploration, both component- and engine-level costs must be supported. This paper presents the results of a preliminary study on a tool that can be used to estimate the development cost for a set of airplane-engine architecture models using publicly available off-the-shelf tools. Our tool focuses on supporting complex system engineering tool chains and methods that require strong interoperability with different tools in a networked environment. The tool, through its architecture, allows the inclusion of supports for early stage cost analysis without directly using historical data, and both system- and component-level cost generations. We describe our approach, tools, estimation process and possible use cases.

Keywords Cost-estimation · Early stage

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