



Building T-Shaped Engineers

A T-shaped software engineer is a term used to describe a professional who possesses both broad and deep skills. The concept of the "T-shaped" professional originated from the idea that the shape of the letter "T" represents the skills and knowledge of an individual. In this context, the vertical bar of the "T" represents the depth of expertise in a speciality, while the horizontal bar represents the breadth of general skills across various domains. The Agile Learning Institute leverages the EngineerKit product from The Enok Collective to provide resources for an agile curriculum that an apprentice needs in order to gain broad generalist skills that are the top of the T.



The horizontal bar of the "T" represents the engineer's breadth of knowledge across many domains. This includes a basic understanding of different programming languages, software development methodologies, testing practices, database management, user interface design, system architecture, and other relevant skills. While the breadth of knowledge may not be as extensive as the core area of expertise, it enables the engineer to collaborate effectively with professionals from different disciplines and contribute to diverse projects.

The vertical bar of the "T" represents the speciality that the software engineer has chosen. These skills typically encompasses a particular programming language, framework, or technology stack. It is the deep understanding and proficiency in this specific area that allows the engineer to tackle complex problems, architect solutions, and write high-quality code.



The T-shaped software engineer is valued for their ability to combine in-depth knowledge and skills in a specific domain with a broader understanding of the software development process as a whole. This combination allows them to communicate effectively with team members, understand the implications of their work on the overall system, and contribute to different aspects of a project beyond their specialized area. T-shaped engineers often act as versatile team players, capable of collaborating with designers, testers, project managers, and other stakeholders to deliver successful software solutions.

Coaching to support T-shaped skills encourages software engineers to continually expand their knowledge base, explore new technologies, and develop a holistic understanding of software development. By combining deep expertise with a broader skill set, T-shaped engineers are well-positioned to adapt to changing industry trends, take on different roles within a team, contribute to the overall success of software projects, and optimize personal earning potential.

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