Fullstack Engineering

Level/Skill	Product Output	Decision Making/Supervision	Communication/Writing	Data structures/Performance	Security	Networking	Fullstack Engineering	Tooling
1	Collaborates with product through designs, mockups, and demos of product features before implementation.	Normally receives general instruction on work and new assignments.	Reports progress on a regular basis as required by the team's operational requirements. Actively solicits feedback. Participates on interview panels.	Demonstrates good understanding of basic data structures like hash tables, linked lists, and trees. Can reason about algorithm complexity. Applies relevant data structures in day to day activity. Can implement a production quality software - it might be not the most efficient or secure, but correct.	Understands basics of web security (can configure TLS on a standalone web server like nginx).	Understands and reasons about browser networking concepts. Understands common networking issues and can troubleshoot issues using the developer console.	Understands Javascript, HTML, CSS, and DOM. Can fix bugs or add small features to frontend applications.	Understands and can use build tools (like npm and yarn), Docker, and Makefiles.
2	Can write high quality user and product focused documentation.	Normally receives little instruction on day-to-day work, general instructions on new assignments.	Provides constructive review on peers' code and design. Helps new team members during their first weeks.		Understands how to utilize browser security features (like headers and cookie attributes) to secure web applications.	Has more granular understanding of the networking design, for example can reason about using gRPC vs HTTP/JSON and websockets and their networking and scalability trade-offs.	Can write frontend applications.	Understands and can use transpilers (TypeScript to Javascript) and SPA frameworks (React, Angular). Can leverage components and styles from third-party libraries to implement designs.
3	Collaborates with the team to scope requirements, based on good understanding of existing longer term product vision and estimates of the system design of a feature of a product.	Work is done independently and is reviewed at critical points.	Supports less experienced peers' technical skills, answering questions and being a resource. Documents and improves team practices.	Understands browser-based event handling and event propagation. Understands the use and implications of closures.	Can use frameworks to mitigate common attack vectors for server side (like secure password storage) or client side web applications (like XSS, CSRF, and SSRF) security vulnerabilities.	Understands scalability and resilience aspects of practical implementation of systems leveraging networking. Understands certificate-based mutual authentication network protocols like mTLS and SSH. Frontend designs are informed by scalable backends, networking techniques such as pagination, connection pooling, backpressure and other aspects of the application design.	Can write web applications that have frontend and backend components. Understands web application session and state management techniques. Writes high quality design documents with few to no critical system design errors.	Strong understanding of CSS and TypeScript. Can build and style components to spec without leveraging third-party libraries.
4	Leads the implementation of the isolated feature/improvement that measurably and significantly impacts business outcomes from getting to the market stage.	Work is reviewed upon completion and is consistent with departmental objectives.	Writes technical articles/blog posts, delivers tech and lightning talks representing the company's technical vision.	Can profile web applications and understands how to minimize webpage re-rendering and painting.	Understands and can implement mitigations for common attack vectors for server side (like secure password storage) or client side web applications (like XSS, CSRF, and SSRF) security vulnerabilities from scratch. Can build secure systems that will pass quality security audit that will uncover few to no critical system design errors.		Understands how to build consistent end-to-end user experiences. Understands principals of information architecture. Can write data-race and deadlock free code. Can implement safe and concurrent and/or parallel systems using minimum amount of shared state, granular locking - systems that are easy to read, extend and troubleshoot.	Expert level understanding of TypeScript. Could add typings to a untyped package. Understands when it is appropriate to leverage advanced TypeScript features.
5	Leads the implementation of a new product line, like native applications, or significant part of the product to deliver it to the market in collaboration with all other teams.	Focuses on providing thought leadership and works on broader organization projects, which requires understanding of wider business. Recognized internally as a subject matter expert. May direct the activities of others.	Writes advanced technical articles/blog posts, gaining significant industry traction or delivers technical talks on major conferences representing the company's vision.	Posesses a deep understanding of web frameworks like React, Angular, or Vue. Can use this understanding to reason about the performance of web applications. Can contribute fixes and improvements to upstream projects.	Has a deep understanding of the browser security model and the web. Understands how browsers make network requests (and which requests they will refuse to make) as well as cross-origin authentication.		Applies system level design to deliver new products or significant new components of an existing product to the market.	
6		Exercises wide latitude in determining objectives and approaches to critical assignments.	Produces peer-reviewed research papers or patent applications.	Designs new data structures and algorithms solving relevant business problems and creating competitive advantage for the company.	Researches and designs new security systems, cryptography and protocols.			