

Software Engineering
Grades Lack the Skills
Startups Need, IEEE
SPECTRUM

<https://spectrum.ieee.org/the-institute/ieee-member-news/software-engineering-grads-lack-the-skills-startups-need>

Software
Engineering

Skills – Traditional versus Startups

Tradition	Needed for startups and next-gen technology companies
SW processes (Chap. 4 & 5) SW analysis (Chap. 7 – Design) Project management (Chap. 13) SW Management (Chap. 11 – configuration management, Chap 12 –SW Support & Maintenance)	Building scalable systems Program for large-scale, distributed, data-intensive systems Cloud computing
Emphasis on SW processing & analysis. Engineers mostly work within their specialty area.	Must wear many hats – market research, new product ideas, define & design architecture, handle development operations. <ul style="list-style-type: none"> • Build app. iteratively, rapid prototyping • Time of product release is critical • Cloud computing resources such as AWS & Google Cloud • Software-as-a-service
Adhere to SE processes, documentation	Application design and its low-level interfaces and code structure to write clean, reusable & scalable code
formal testing – static analysis	Testing of distributed systems, web services and infrastructure resiliency