CS Career Pathways: Full-Time and Internship Roles

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# Introduction

* Overview: This analysis breaks down common job roles for computer science students (BS and MS) in the US.
* It focuses on internships and full-time roles across tech, finance, and manufacturing.
* It identifies both the listed and unlisted skills that help students succeed in each role.

# Internship Roles

* Front-End Engineering Intern
* Back-End Engineering Intern
* Full-Stack Software Engineering Intern
* Mobile Engineering Intern (iOS/Android)
* Information Security Intern
* Data Scientist Intern
* Data Engineering Intern
* Product Management Intern

# Full-Time Roles

* Software Engineer (Front-End, Back-End, Full-Stack, Mobile, Embedded)
* Data Roles (Data Scientist, Data Engineer, Data Analyst, ML Engineer)
* Infrastructure Roles (DevOps, Site Reliability Engineer, Security Engineer)
* Quality Assurance and Test Engineering

# Cross-Functional Roles

* Product Manager (Technical)
* Solutions Engineer / Technical Consultant
* Quantitative Developer / Analyst (Finance)

# Industry Comparisons

* Startup vs. Large Company
* Tech vs. Finance vs. Manufacturing
* Role Specialization vs. Breadth Expectations

# Summary and Recommendations

* Map course learning outcomes to job skills.
* Account for both explicit and implicit job expectations.
* Tailor course recommendations based on role and industry interest.