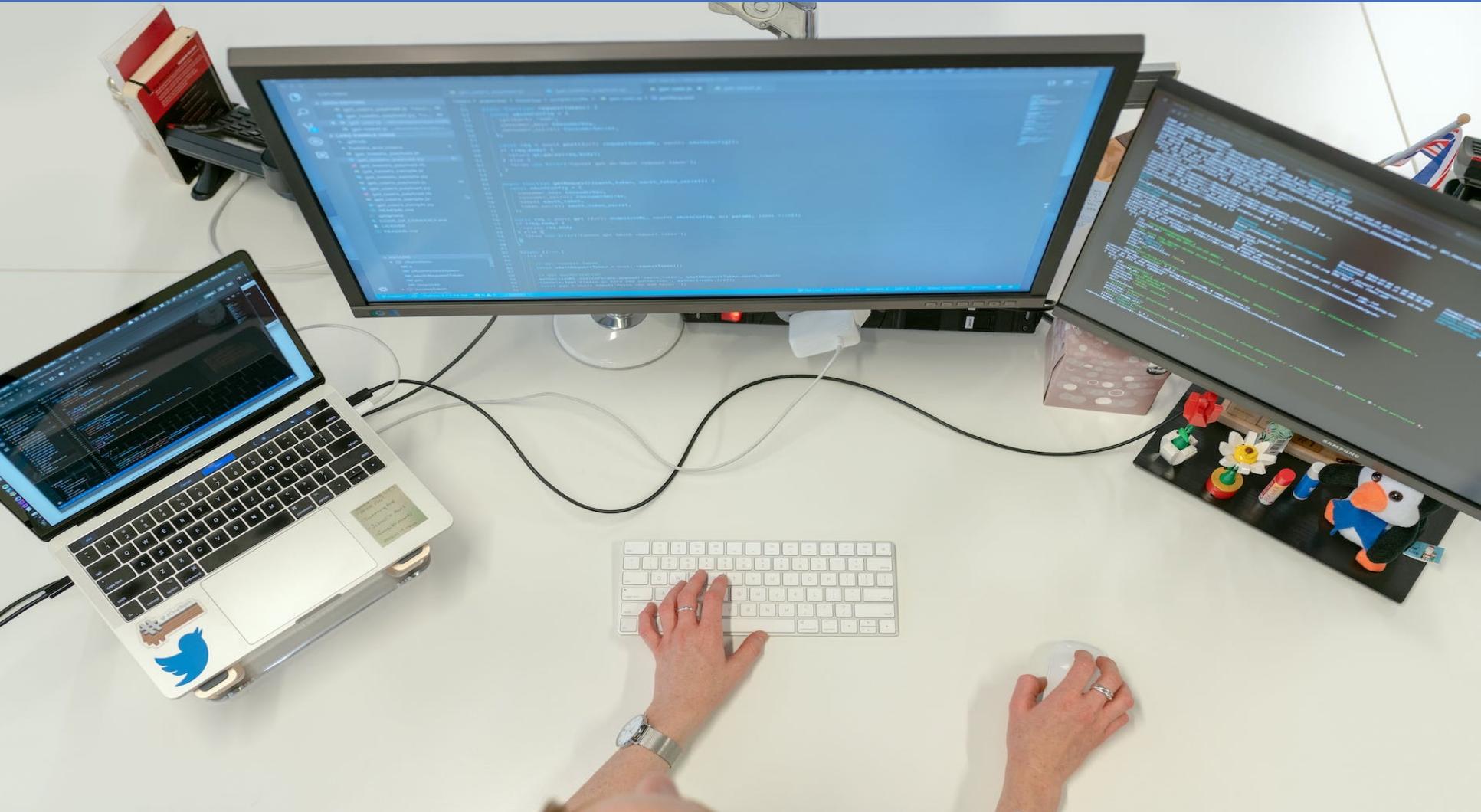


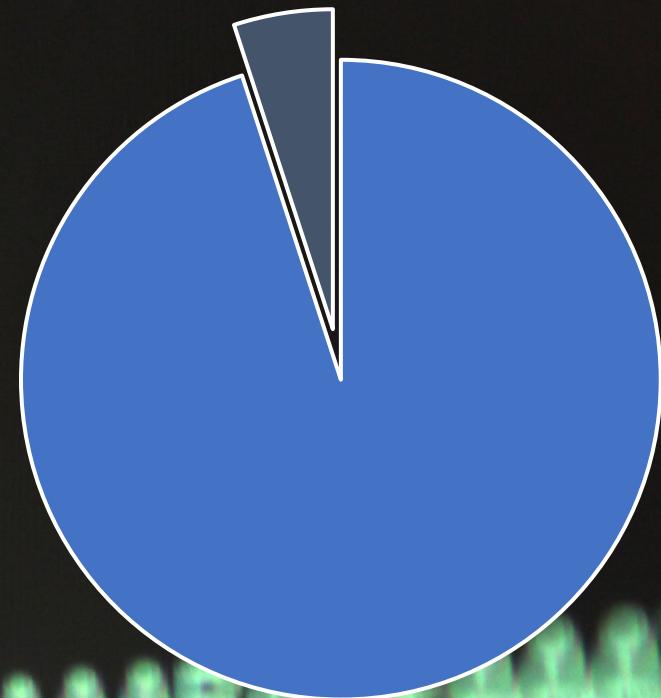
Education New Software Engineers



Self Study

Requires Self Study

- 95% reported that they self-studied for 10 to 15 hours per week
- Diverse Skillset is required
- Need to learn evolving technologies
- Many tools to assist with self study
 - Clubs
 - Hackathons
 - Other programming contests
- Many technologies are not taught the degree
- Project Based Learning
 - CEN4090L
- Problem Based Learning



The Failure Of Cs Degree

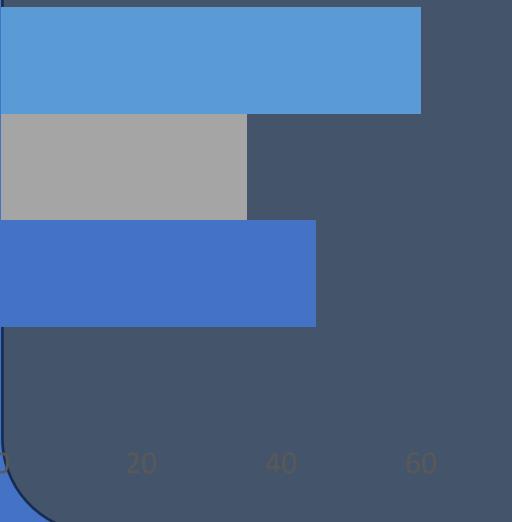
Feel Prepared

60% - Students

35% - well

45% - technically

- CRA



- Provide students with an opportunity to work in similar environments as production environments
- Focus on relevant technologies
 - Angular JS
 - MongoDB
- Prepare students for interviews
- Focus more on theory than the applications
- Prepare for shifts in software engineering needs
- Help students with their resume

Courses

Code Camp

Data
Structures

These Fail To
Prepare
Students For
The Job

Technical
interviews are
often not
reflective of the
skills needed to
succeed in the
job

98%
Technical
interviews are the
most important
factor

60%
Students pursue
internships

The Importance Of Internships



Internships allow software engineers to gain real world experience

The need to conduct internship training at the undergraduate level pertains to providing students with an opportunity to improve their academic knowledge and enhance their soft skills as well as to acquire additional skills that are highly needed in the workplace later on.

G. Jaradat

Many University's fail to offer courses that prepare students for internships

Learn Technologies

- Learning another technology is difficult

"They are unable to successfully relate their previous knowledge

about subsetting, in R, to Python"
(Shrestha 2022)

Project Based Learning

problem-based learning places a greater emphasis on changing the behavior of students rather than mastering the concepts

A Hackathon effectively simulates the skills needed for developing production code. Additionally, Project-based learning is one of the most effective ways to learn a new technology or to improve students' knowledge of their chosen technology

Projects are extremely important in simulating real world applications of programming. Similarly hackathons allow for students to develop a cohesive project, as well as work together with a group.

How Schools Can Accommodate Students

- Creating more clubs centered around explorative programming
- Teach emerging technologies
- Provide internship preparation courses
- Shift from small simple projects to large ones
- Allow students to work together on assignments (group work)
- Tools for self study



"Internships provide a training course for students who are not otherwise satisfied with their degree"
G. Jaradat

How Schools Can Accommodate Students

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How Schools Can Accommodate Students

Questions?

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