Alumni Survey Result

UNIVERSITY of GUELPH

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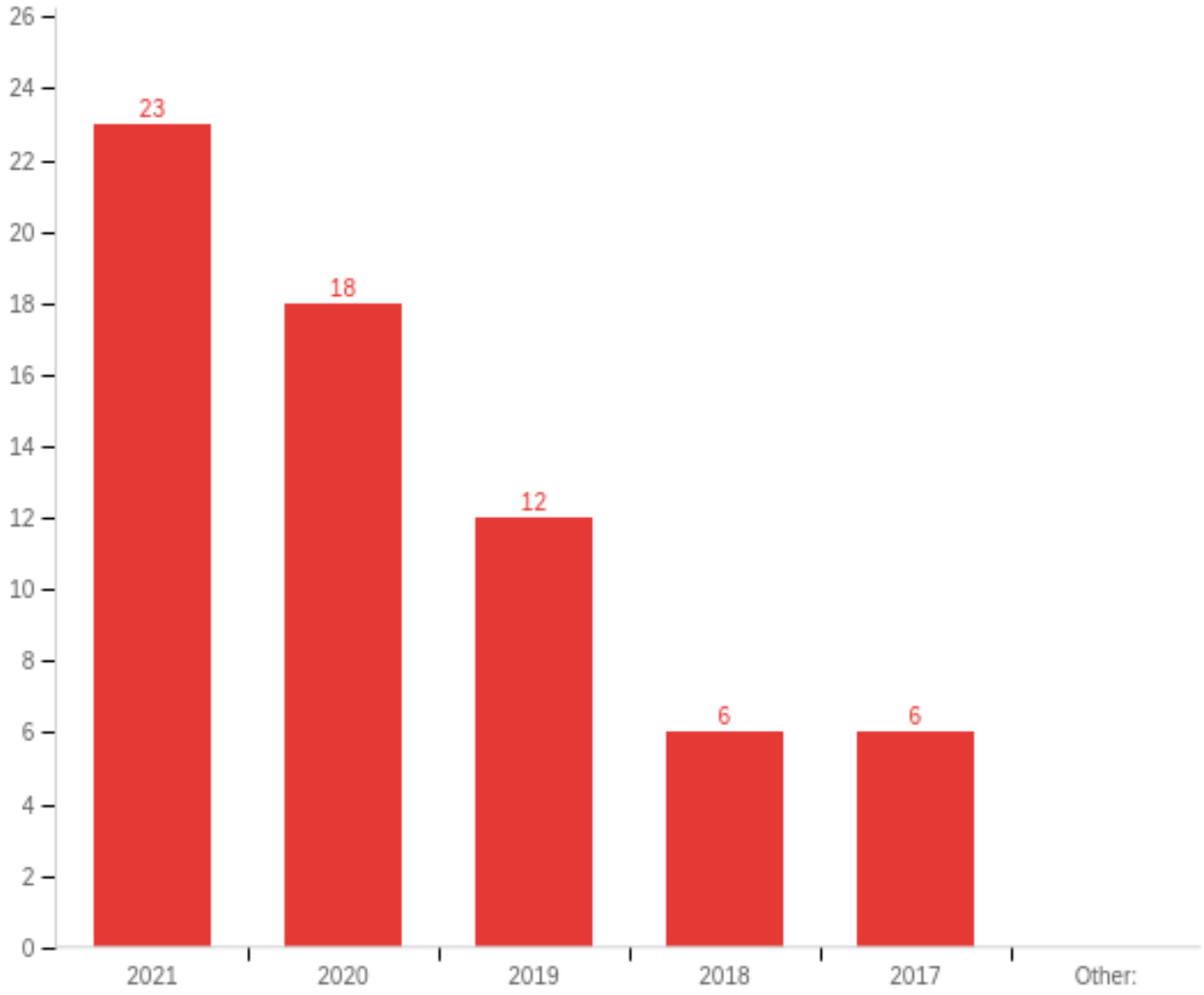
Computer Science

Year of Graduation



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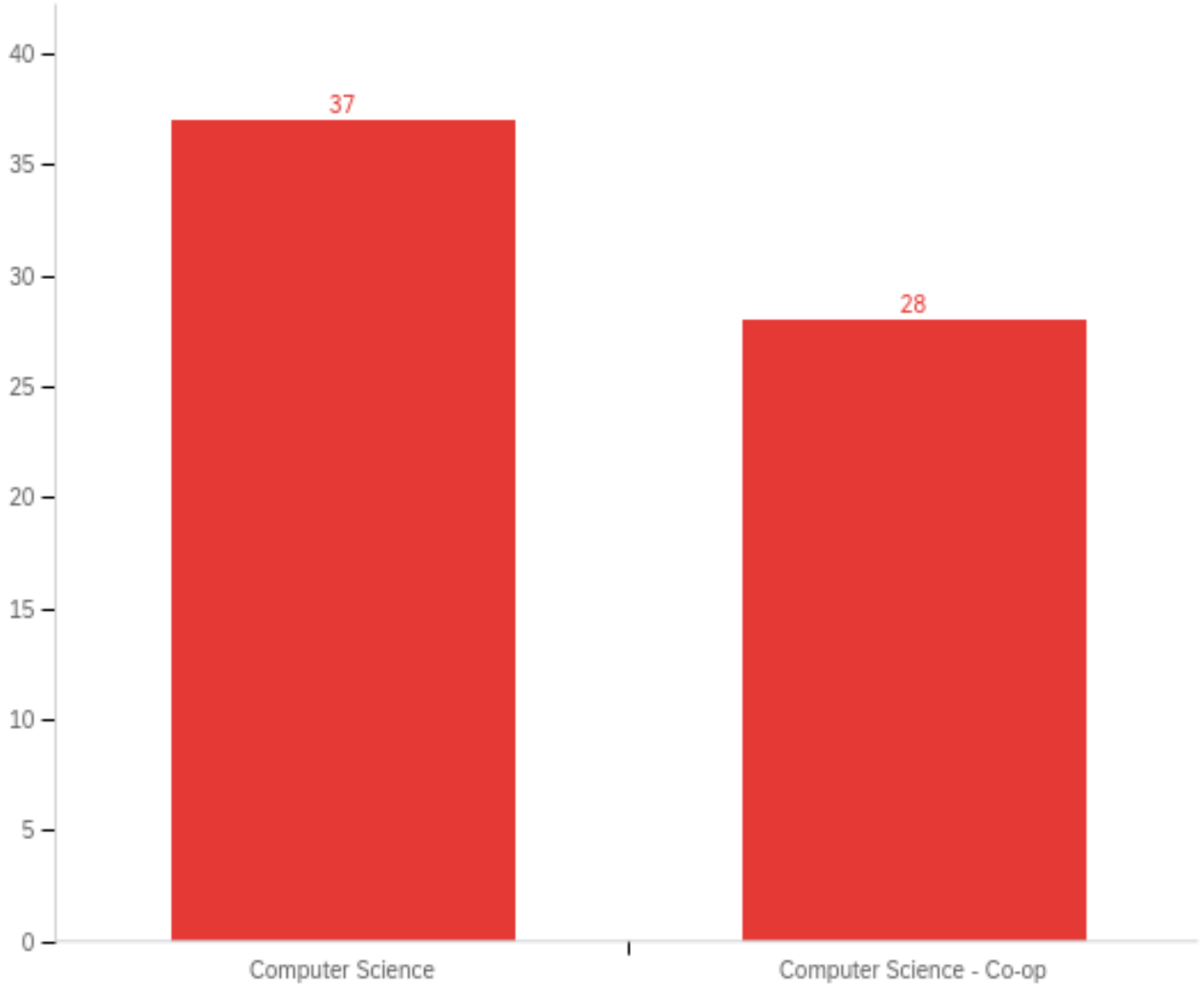
Degree Program



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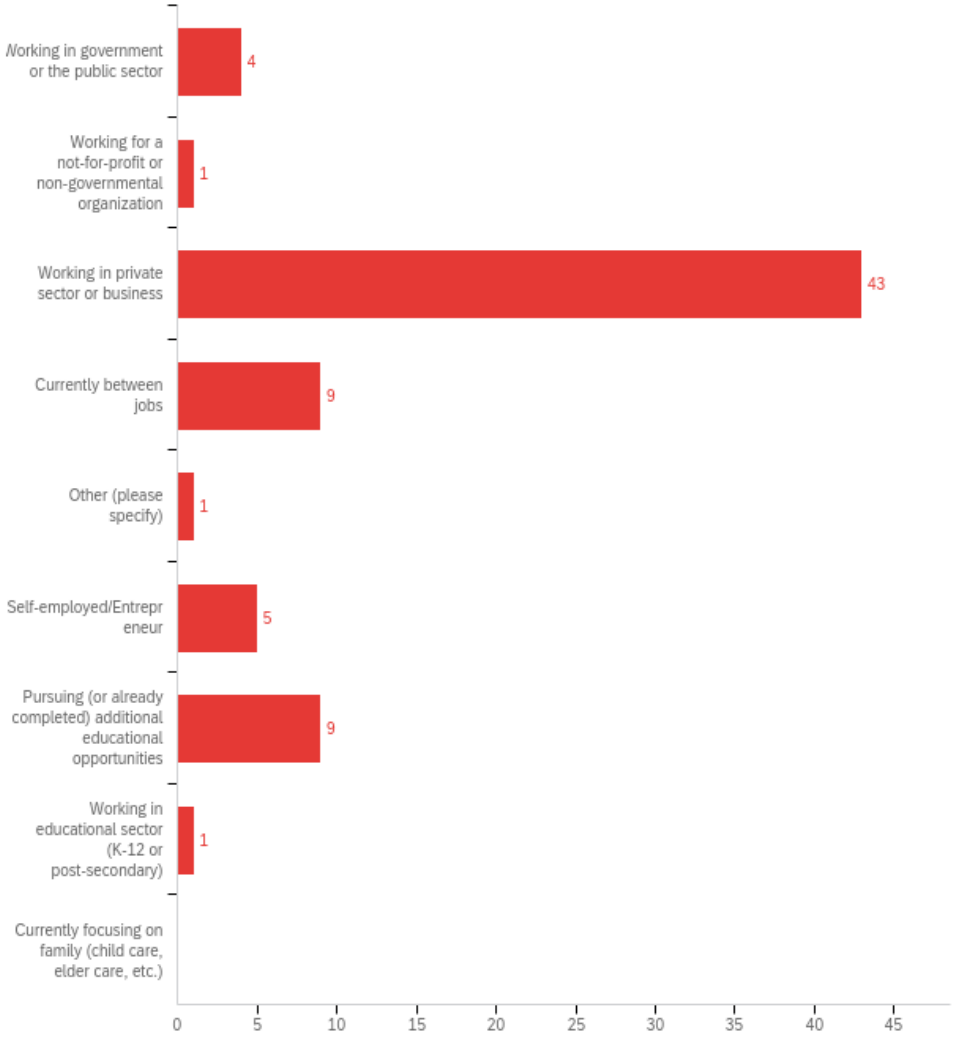
Academic or Professional Career Status



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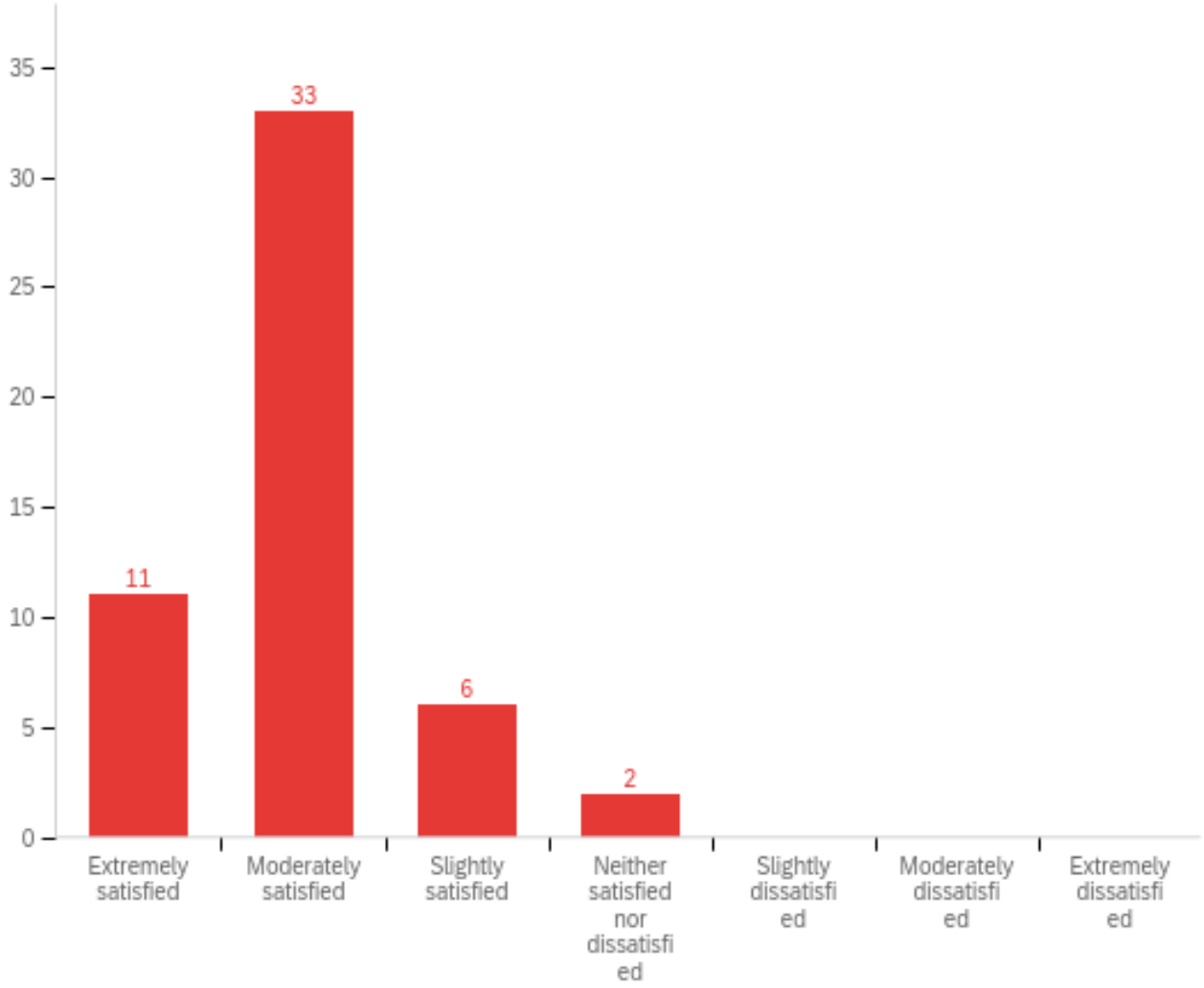
Overall Experience for Undergrad Study



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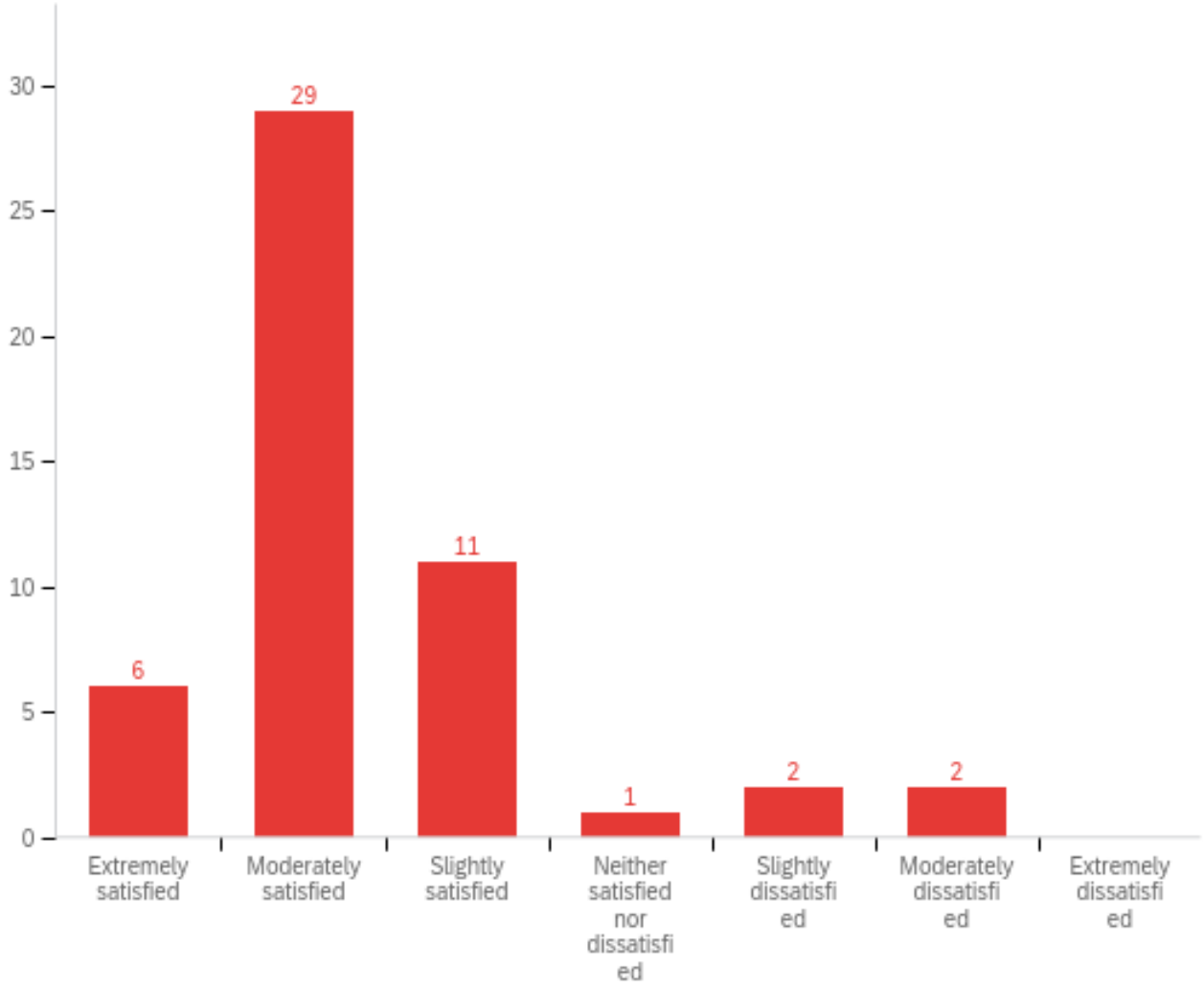
Satisfaction on Teaching Quality



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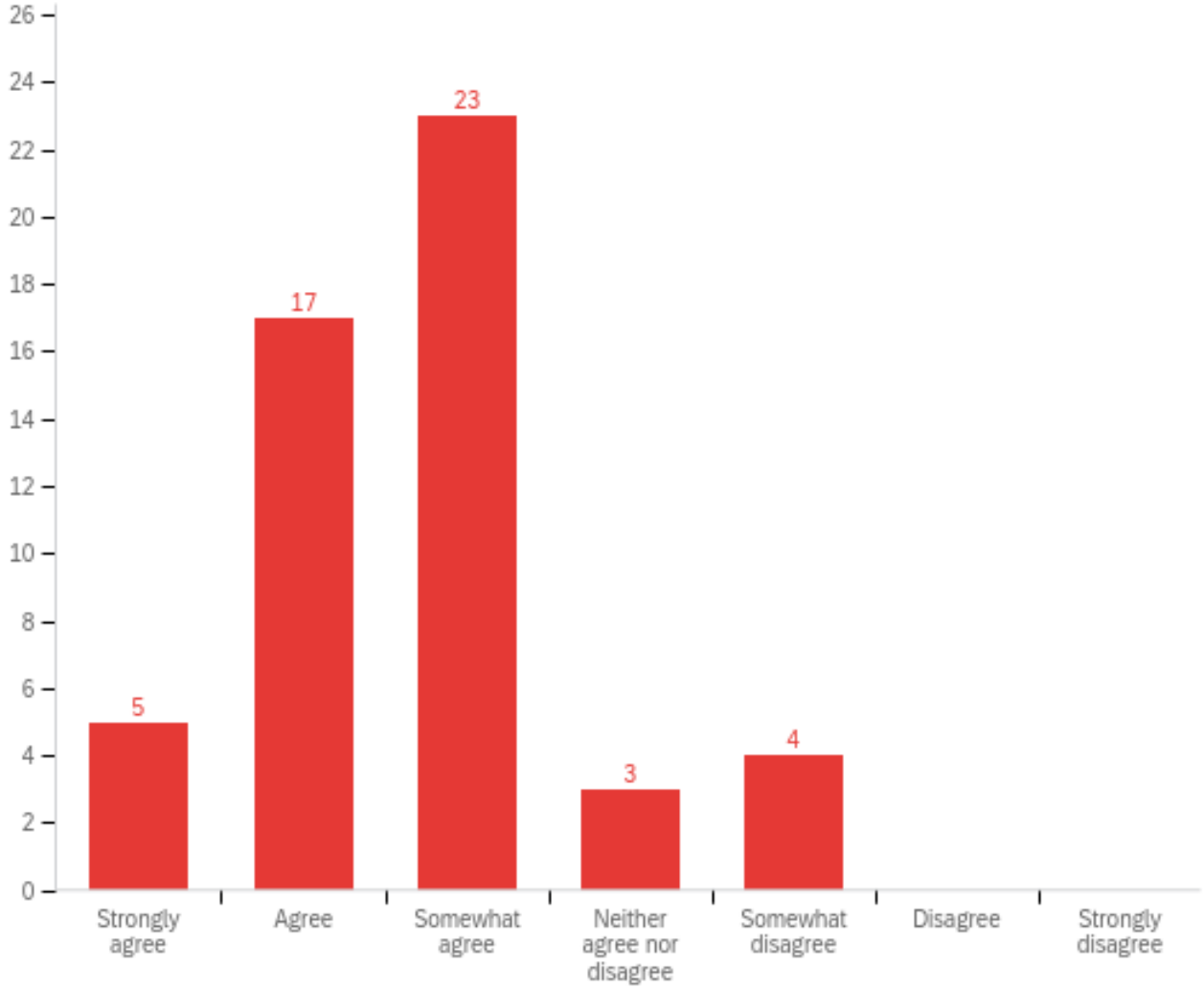
Prepared for Post-graduation Career



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Comments on Main Strength

- Good variety of courses to pick and choose.
- The breadth of knowledge learned.
- Learning low-level languages early on in my academic career…
- I appreciate that C is the main language taught, as it provides a very solid foundation for learning other languages.
- The program overall put a strong emphasis on the core studies, and the theory…
- The community and environment within the program is a lot healthier, friendly, and supportive than other schools…
- Many of the profs were very welcoming and I had an amazing time learning under them.

Comments on Main Weakness

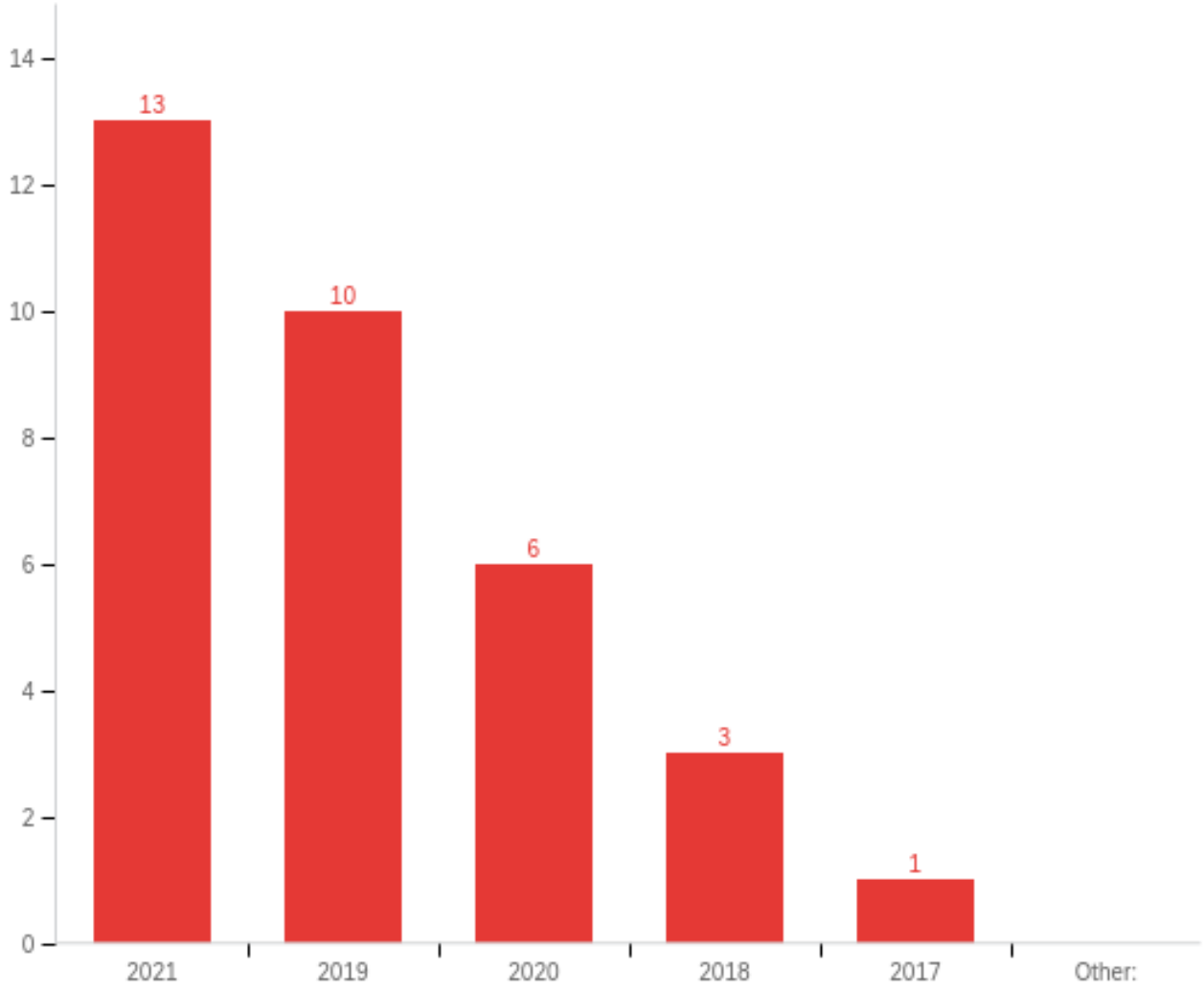
- It would have been nice if there could be more courses specific to fields we might be interested in.
- Lack of early-year electives was the main weakness.
- NOT Learning modern programming languages, sticking to strictly C for the majority of courses set me back in my career.
- Focus on C should stop after second year once students have a strong base, classes should then focus on tools used on jobsites. This includes Java, Python, C++, AWS, cloud computing services.
- Co-op and non co-op streams being so mixed, caused many to come in with lack of knowledge.
- The variety in course difficulty when different profs teach a course.

One Change to Improve the Program

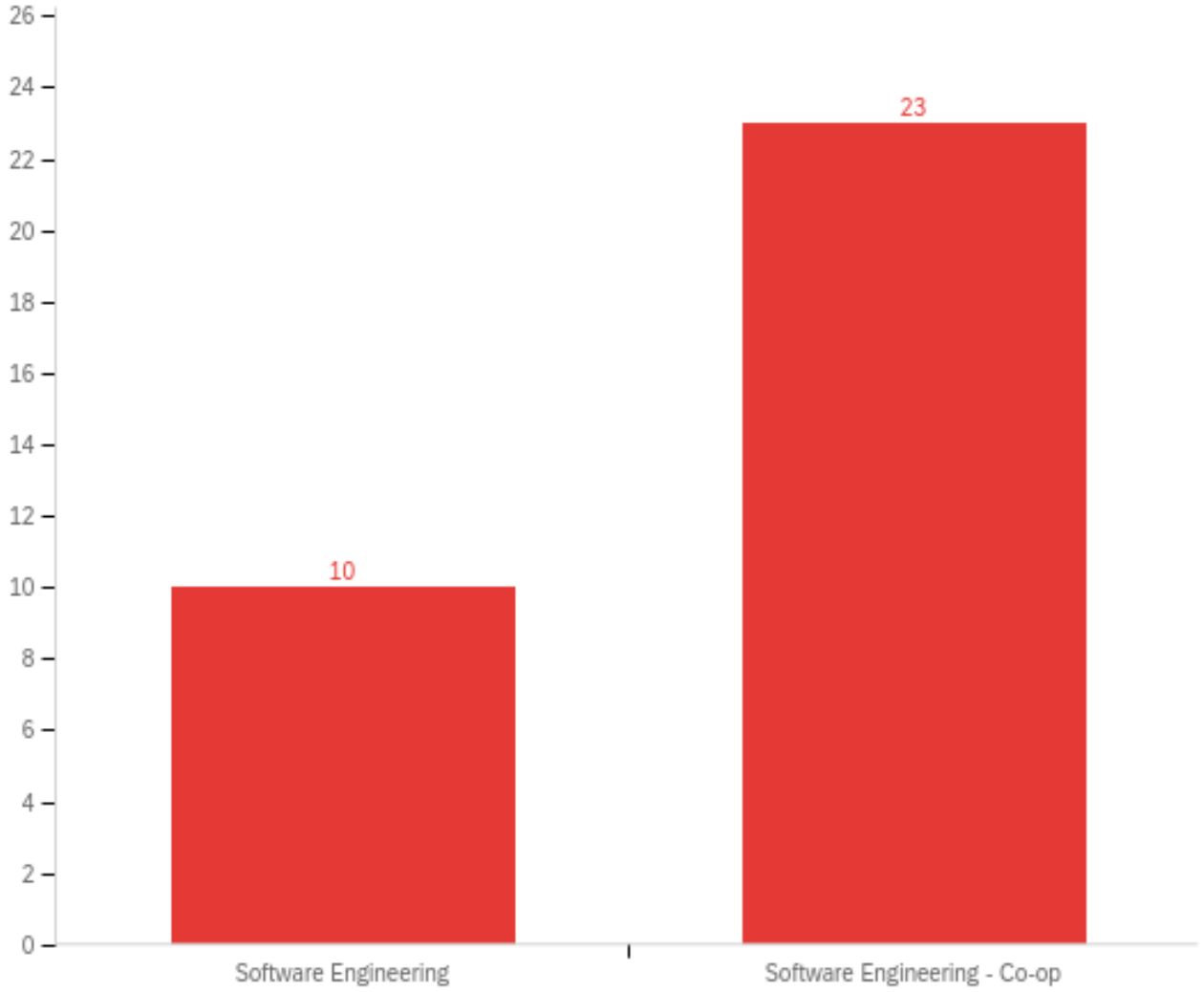
- Make software testing a required course.
- Teach with languages currently being used in industry.
- Consult industry professionals on how day-to-day software development is done on an organic level without so much concern for how things are done by the book.
- Stop forcing students to take so many courses outside of Comp courses as an “area of app”.
- More courses, perhaps dropping the AoA requirement completely.
- Create streams for AI/ML/DS, web development, mobile development, infrastructure, cybersecurity, and more.
- Have the courses be offered in both fall and winter. And please have some summer courses!!!

SOFTWARE ENGINEERING

Year of Graduation



Degree Program



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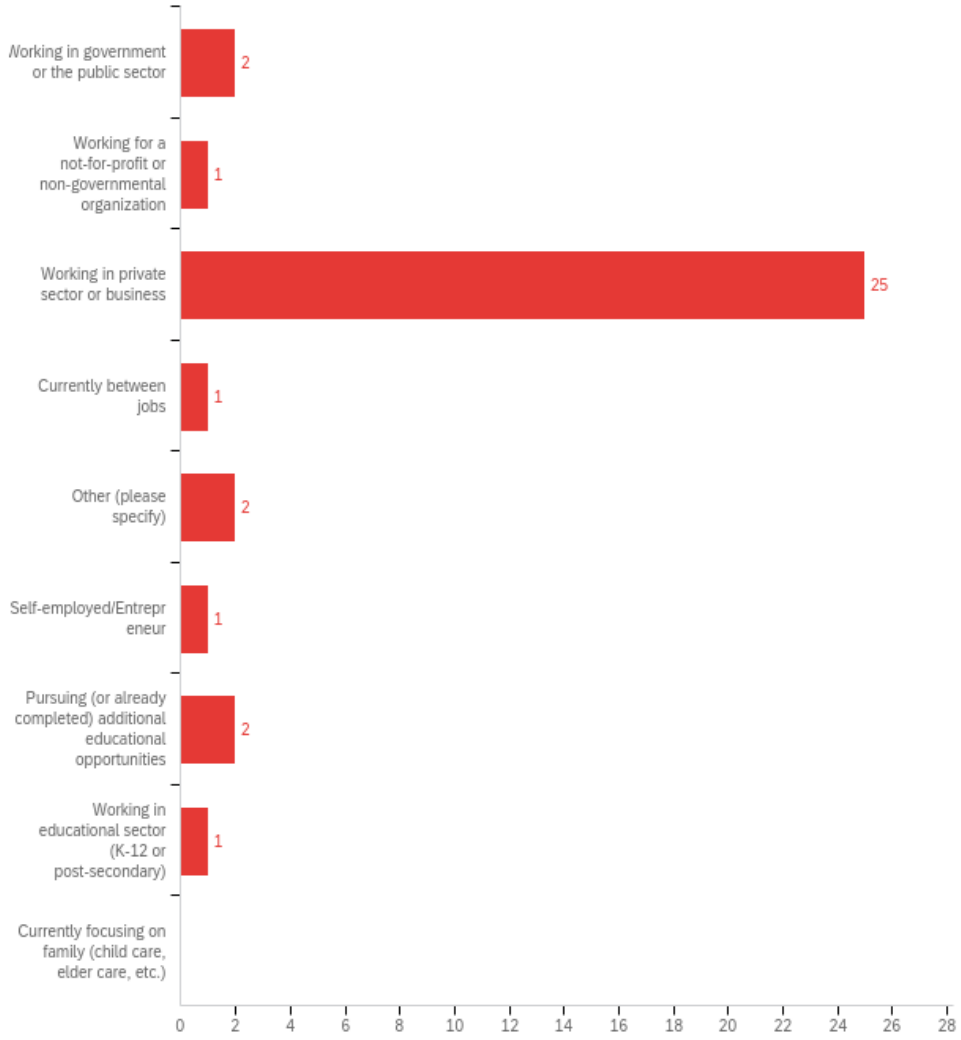
Academic or Professional Career Status



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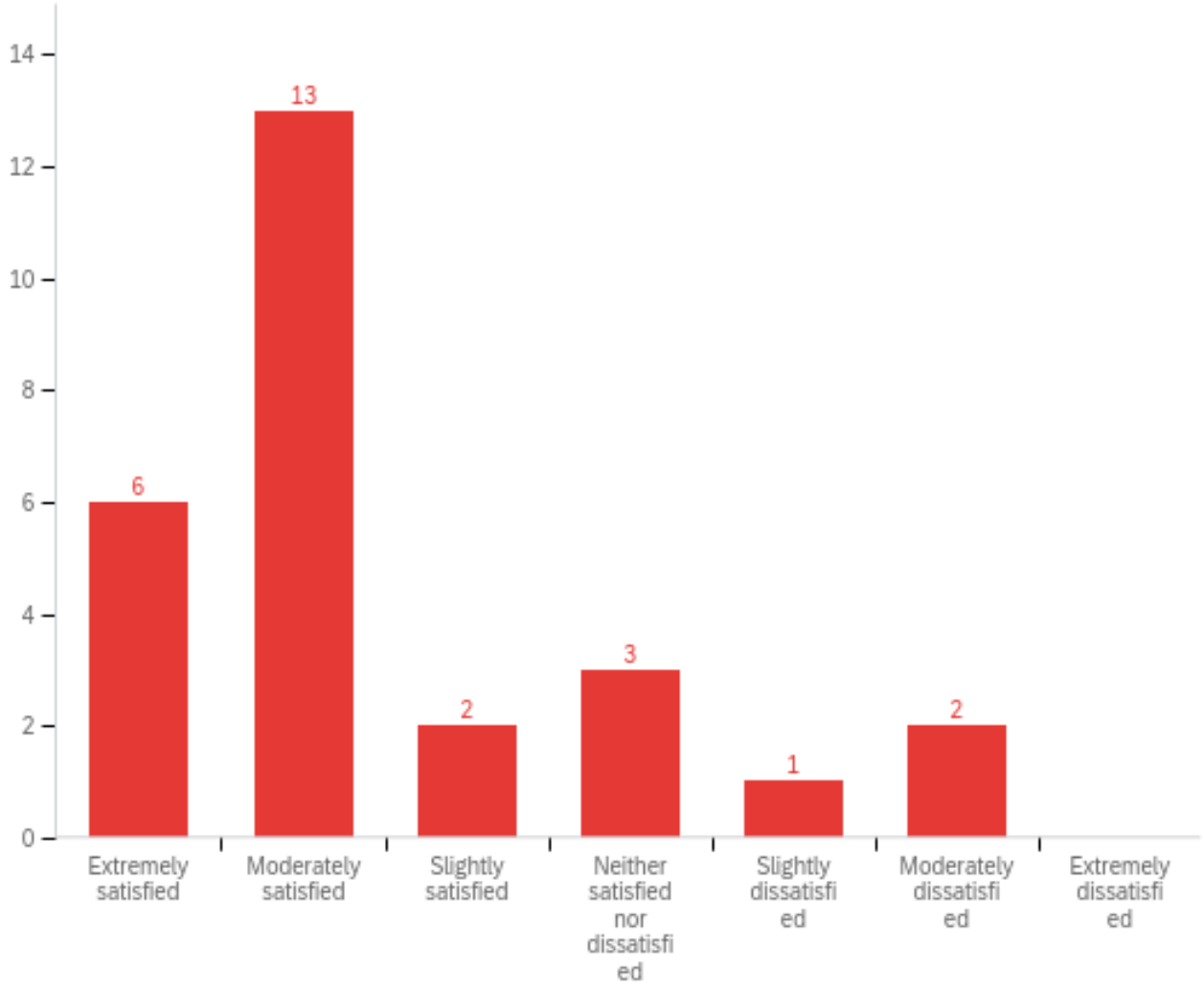
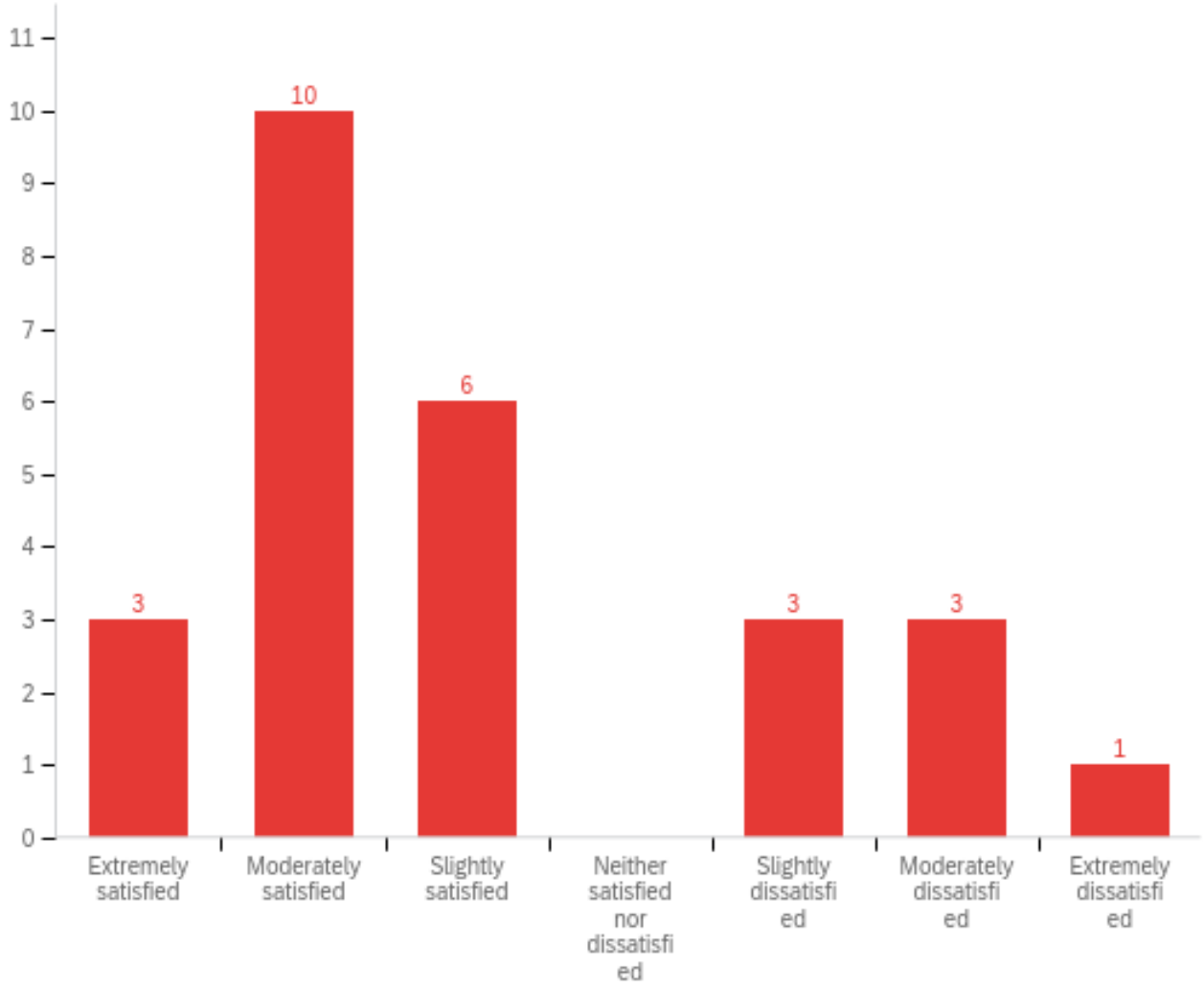
Overall Experience for Undergrad Study



Comments from Dissatisfied Students

- Learning similar principles across multiple classes seamed like unnecessary redundancy.
- There were three or four courses in the software engineering degree that had the exact same subject material…
- Almost exclusively developing in C puts the university of Guelph graduates at a severe disadvantage in the professional space.
- Not enough courses on languages and concepts that are prevalent in the industry.
- Not having exposure to new technologies and DevOps was a rude awakening in the “real world”.
- Teamwork and open-book examinations should be more common.

Satisfaction on Teaching Quality



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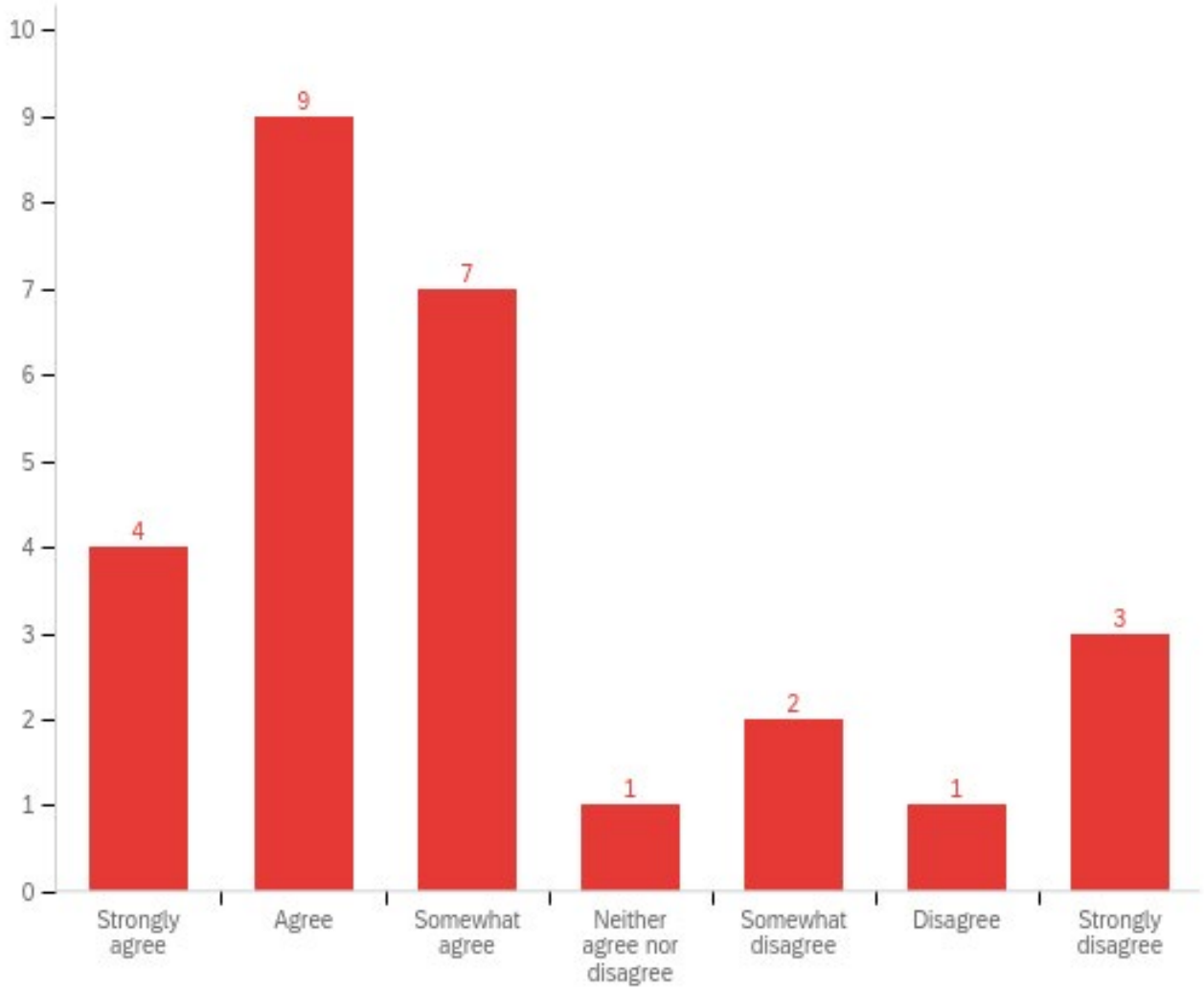
Prepared for Post-graduation Career



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Comments on Main Strength

- Learning to break down large problems into solvable chunks, and the foundations of programming.
- The main strength of the Software Engineering program was the Software Design stream of courses.
- The experience of working within a team to prepare us for working in the real world.
- The group work projects were great experiences.
- Heavy focus on teamwork and design process.
- Co-op placements are far and away the most beneficial experience that I gained during my degree program.
- Work term experience doing real-world software development both for learning and as a reference on a resume.

Comments on Main Weakness

- A focus on foundations and theory and a weakness on modern software projects, stacks, and workflows.
- Little depth of knowledge in other aspects of computing such as security or AI/ML.
- A lot of course content overlapped, mainly in the Software Design courses.
- We kind of went overboard with the 5 design courses, 3750, and 3760.
- Courses that can help develop a portfolio of interesting projects that can be used for getting that first job.
- Area of application focused most of the elective credits onto a single discipline and could be difficult to coordinate alongside co-op work terms which made scheduling courses tricky sometimes.

One Change to Improve the Program

- Add streams to the program that provide more in depth teachings to different sectors of the computing word, i.e. security, AI, UI, etc. streams.
- Each of these Software Engineering core courses (at least after the first) should have a tangible project or portfolio piece developed within them.
- Make a modern corporate development course. Drop the students in 3rd year into a huge project that's partially complete and TEACH them how to contribute to it's development, and how to learn to read complex code they did not write.
- Have professors interview alumni currently in the software engineering industry to ask about modern technologies, methodologies, and cultural practices in the workplace.

How to Respond

Defend our Programs

- The response is overall very positive.
  - Satisfied v.s. unsatisfied is about 4:1.
- For some of the concerns raised, there are counter arguments:
  - “NOT Learning modern programming languages, sticking to strictly C for the majority of courses set me back in my career.”
  - “I appreciate that C is the main language taught, as it provides a very solid foundation for learning other languages.”
- We could defend our programs easily in the CPR self-study report.

Revise our Programs

- Possible directions:
  - Expose students with modern languages:
    - *Writing quality code; take advantage of modern features*
  - Add focus to each software design course?
  - Offer stream options (e.g. AI, cybersecurity) as alternatives to AoA.
    - *Include low-level elective courses.*
  - Set up industry advisory board.
  - Summer academic term and flexible co-op placement terms:
    - *Offer courses in both Fall and Winter*
- This can be an opportunity for us to revise our program and request additional resources.