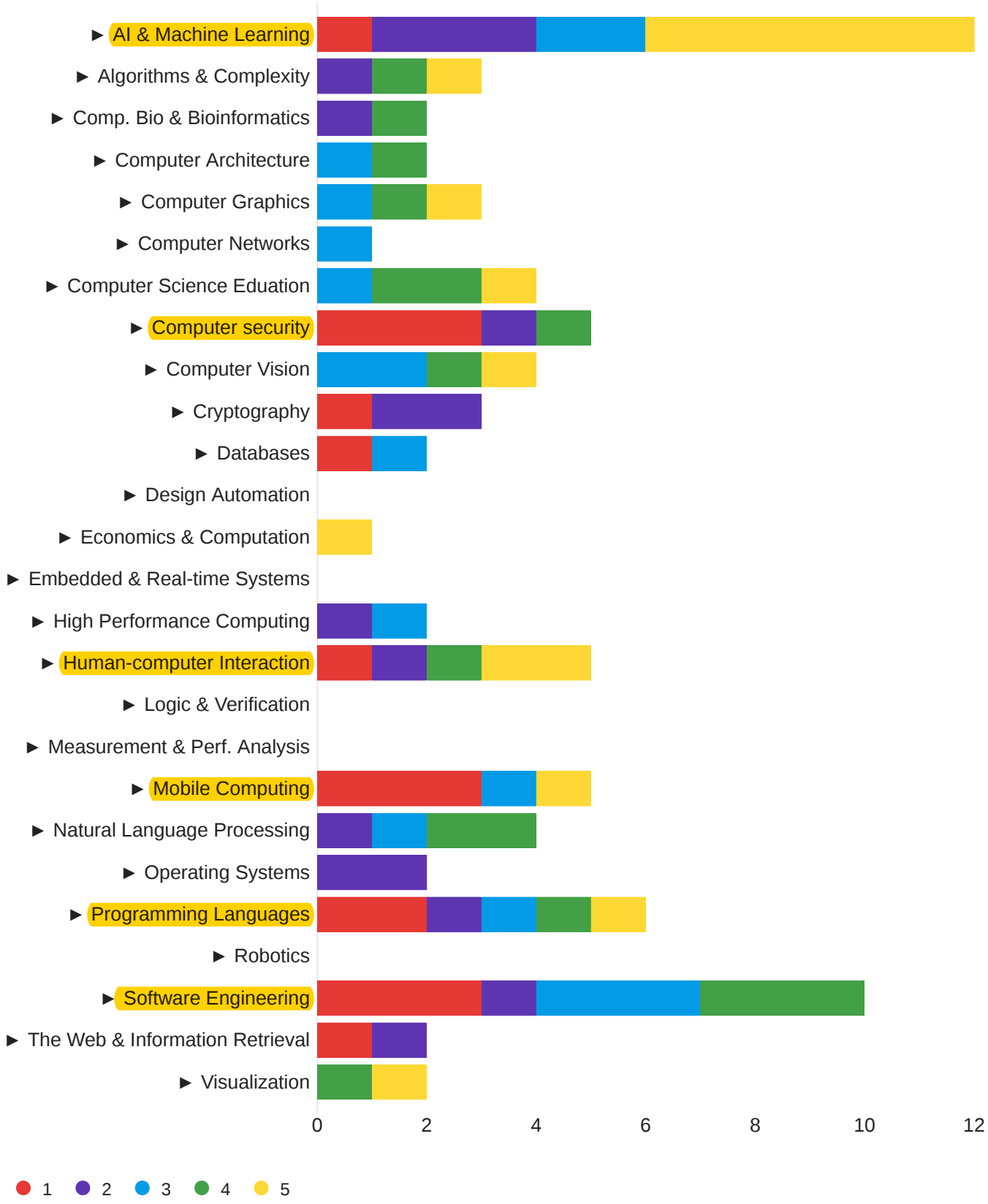
Q1 - Please rank your top 5 of the following research areas for hiring (5 being...

Field	Min	Max	Mean	Standard Deviation	Variance	Responses	Sum
► AI & Machine Learning	1.00	5.00	3.58	1.50	2.24	12	43.00
► Algorithms & Complexity	2.00	5.00	3.67	1.25	1.56	3	11.00
► Comp. Bio & Bioinformatics	2.00	4.00	3.00	1.00	1.00	2	6.00
► Computer Architecture	3.00	4.00	3.50	0.50	0.25	2	7.00
► Computer Graphics	3.00	5.00	4.00	0.82	0.67	3	12.00
► Computer Networks	3.00	3.00	3.00	0.00	0.00	1	3.00
► Computer Science Eduation	3.00	5.00	4.00	0.71	0.50	4	16.00
► Computer security	1.00	4.00	1.80	1.17	1.36	5	9.00
► Computer Vision	3.00	5.00	3.75	0.83	0.69	4	15.00
► Cryptography	1.00	2.00	1.67	0.47	0.22	3	5.00
► Databases	1.00	3.00	2.00	1.00	1.00	2	4.00
► Design Automation	0.00	0.00	0.00	0.00	0.00	0	0.00
► Economics & Computation	5.00	5.00	5.00	0.00	0.00	1	5.00
► Embedded & Real-time Systems	0.00	0.00	0.00	0.00	0.00	0	0.00
► High Performance Computing	2.00	3.00	2.50	0.50	0.25	2	5.00
► Human-computer Interaction	1.00	5.00	3.40	1.62	2.64	5	17.00
► Logic & Verification	0.00	0.00	0.00	0.00	0.00	0	0.00
► Measurement & Perf. Analysis	0.00	0.00	0.00	0.00	0.00	0	0.00
► Mobile Computing	1.00	5.00	2.20	1.60	2.56	5	11.00
► Natural Language Processing	2.00	4.00	3.25	0.83	0.69	4	13.00
► Operating Systems	2.00	2.00	2.00	0.00	0.00	2	4.00
► Programming Languages	1.00	5.00	2.67	1.49	2.22	6	16.00
► Robotics	0.00	0.00	0.00	0.00	0.00	0	0.00

► Software Engineering	1.00	4.00	2.60	1.20	1.44	10	26.00
► The Web & Information Retrieval	1.00	2.00	1.50	0.50	0.25	2	3.00
► Visualization	4.00	5.00	4.50	0.50	0.25	2	9.00

Select a field

Q1 - Please rank your top 5 of the following research areas for hiring (5 being...



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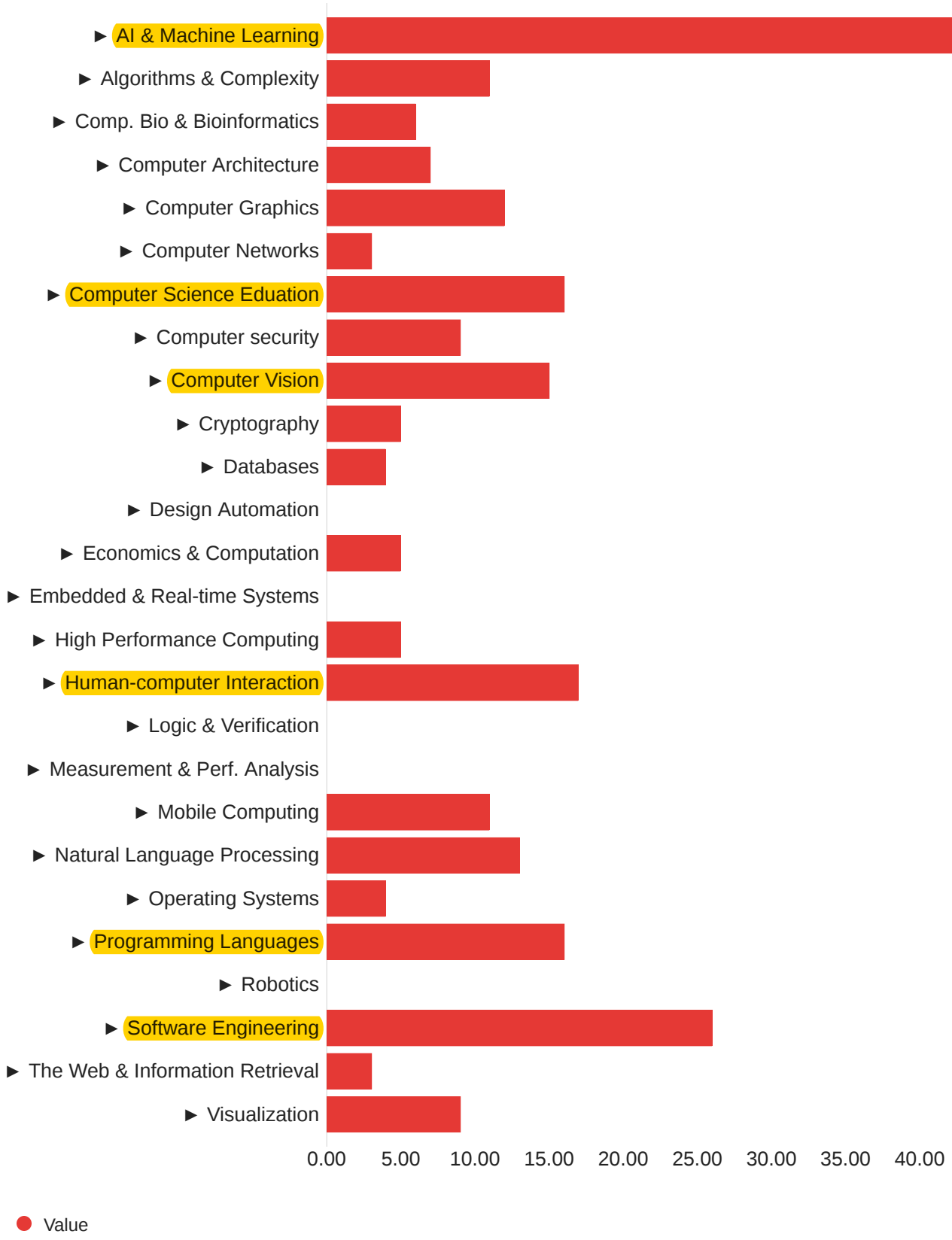

Q2 - Please provide comments/rationale on your selection.

Please provide comments/rationale on your selection.

More than any specific research area, we need people who can teach the courses that make up our core.

I keep hearing that "no one" wants to teach these, especially operating systems.

What is critical about a candidate's research area is whether they have a viable research program that can be carried out at U of G with the resources that we will have.

I have identified the areas above because we have *ALREADY* identified these areas for focus through U of G initiatives such as Bioinformatics, CS+AI, etc. We should ensure that we maintain strength in these areas, especially as we are losing a number of faculty that contributed to these.

If we, as a department, are going to create a new focus area then this needs to be an open, workshopped discussion.

WHY AM I BEING FORCED TO CHOOSE 5? THIS IS VERY BAD SURVEY DESIGN. My number 5 choice should be ignored.

I think we have a genuine opportunity for growth along research and specialism teaching (at undergraduate and graduate levels) by building on our current strengths in HCI. As such, it would be great to hire more HCI folk, with a particular need for Visualization and Mobile Computing.

Additionally, with upcoming retirements and other undergraduate program needs, I think it vital to buttress our Software Engineering and Programming Languages.

Since "Compilers" is the only required 4th-year course for the Computer Science major, I'd like to rank it the top one. Unfortunately, it's not provided in the given list; so, I put it with the choice for "Programming Languages". In addition, "Operating Systems" and "Databases" are the next two choices, mostly due to the recent retirements. Finally, "Natural Language Processing" and "AI & ML are the additional choices because of their popularity among our graduate students.

These are the main areas that I see gaps for teaching / research.

Various branches of computer science are advancing to address contemporary needs across different industries. AI has been utilized for a long time in various sectors to solve problems, and platforms like ChatGPT have made AI more accessible to users of all skill levels. Consequently, there is a growing demand for experts in this field who can educate the next generation on effectively collaborating with AI to improve productivity and problem-solving.

With the digital revolution, high-performance systems are essential across the entire digital infrastructure, from storage to computation, to meet today's data generation and processing demands.

The issue of cybersecurity has been a concern since the rise of digital businesses, and there is a global shortage of experts in this field. Cybersecurity is a vast area that requires individuals with the right skills to address evolving challenges effectively. Additionally, advancements in quantum computing are on the horizon and pose a significant threat to many existing security measures. Thus, experts urgently need to research this field and propose practical solutions to protect our digital systems.

The School would benefit from another "Theoretical" presence. We have a gap there. CIS 1910 and CIS2910 are often taught by sessionals. Such a hire could easily handle one of these core undergrad courses.

We expect to see that several colleagues will retire in near future. Our school is lacking expertise in some areas, such as computer architecture and organization, programming languages, operating systems and mobile computing.

Computer Security stands as a strategic area for development at both SoCS and UoG. We proudly offer one of the premier Master's programs in Canada, backed by substantial industry support for our initiatives. This specialization is widely recognized, and continued expansion through additional hires is well-justified given its significant growth potential. Cryptography represents a related field and holds the second rank in our priority list. Following that, AI/ML emerges as another vital area of focus at UoG, offering contributions to diverse fields, notably in the realm of cybersecurity.

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There are too many AI/security people already in the school. There is a need to backfill some of the knowledge that will be lost with retirements.

With Deb and Dave retiring you have no one to teach cloud computing or any sort of distributed computing course. That also isn't even on your list. Given the importance of containerization and distributed computing in the field, this is a grievous oversight. I've prioritized the closest categories.

1 - It appears that we may be losing a faculty member in this area and should have additional strength
2 - We have several people involved in this area already, so the area should be strengthened to create an expertise or institute
3- The two faculty members who teach in this area are leaving, so there is an urgent need
4 - We do not have a single person doing formal software engineering in this area, even though we advertise it as a program!
5 - Programming is the bread and butter of the undergraduate program. We always need people who can teach programming courses.

*** I noticed various "hardware" related areas mentioned. However, we do not have any room (for required courses) in our current undergrad curriculum to support these areas. Let's not kid ourselves here! ***