Introducing the Student Forum Column

Welcome to the Student Forum, a new column that intends to connect IT students with industry, government, and academia. In this introductory article, we explain the rationale of this new column, discuss its aims, and provide readers with different ways to contribute.

The role of students in IT has become increasingly important over the past 20 years. Today, students are not only our future colleagues in industry and academia, but they also (and perhaps more importantly) constitute the workforce of a very relevant part of the software industry.

STUDENTS IN INDUSTRY AND GOVERNMENT

Traditionally, graduate students devoted their time to completing their PhD thesis. Today, they participate intensively in joint projects with industry and government, who often fund these projects. Previously, graduate students often ended up working in academia after earning their PhD. Today, due to the tremendous growth of the software industry (and major budget cuts in academia), an increasing number of PhD graduates work in industry. They are more aware of technology trends, sometimes because their PhD projects solve concrete industry needs. But they are also active in exploring job opportunities, and many times they work in industry while finishing their thesis.

The most shocking change is in the number of undergraduate students involved with industry. The increasing need for human resources has completely changed how undergraduate students interact with industry, and therefore how they interact with IT professionals. Most large companies (like Google and Microsoft) have initiated internship programs where undergraduate students can experience the corporate world. How much this experience has shaped software companies is being studied, but it’s a fact that such companies try to establish links with students as early as possible.

In many emerging countries, the explosion of the software industry has led to a shortage of professionals, so students are constantly being hired. Undergraduate students often begin working as developers before they’ve finished their computing education. The impact of this situation has not been completely addressed yet. However, some observations are that students take longer to finish their education and that fewer students go into research as their career paths are being defined earlier. These consequences are not necessarily negative, but they need to be assessed.
Technology changes rapidly—there are new kinds of jobs being created in both industry and government. For example, it was reported that 4.4 million IT jobs would be created globally to support big data by 2015.1 Because programming languages evolve rapidly, there’s a lively discussion about new types of careers, such as coding boot camps. This new scenario might affect students positively but it’s still in its infancy.2

Considering the circumstances of the “birth” of some of the key software players (like Google and Facebook), one might argue that the explosion of the software industry is related to students’ involvement in the software industry.

STUDENTS IN RESEARCH AND ACADEMIA

Graduate students have been one of the key drivers in academia. They perform research while pursuing their PhDs, participate in research projects, publish in journals and magazines, and attend and speak at events like doctoral consortiums and student volunteer programs. The impact of students’ participation in scientific conferences is similar to the impact of their participation in industry activities.

Students also help with other typical academic tasks: they teach and mentor younger students, review papers, help prepare research proposals, and get involved in seeking funding.

In a different but related context, years ago the European Commission launched the Erasmus+ Program (ec.europa.eu/programmes/erasmus-plus/node_en), which provides opportunities for more than 4 million Europeans to study, train, gain experience, and volunteer abroad. Though not restricted to IT, most computer and engineering-related organizations have extensively used this program.

STUDENTS AND IEEE

IEEE was early to recognize the importance of students, as seen with IEEE Student Branches and the Computer Society’s Student Chapters (www.computer.org/student-chapters); there are branches and chapters on all continents. These serve not only as the liaison between IEEE and IT students, but they also organize activities ranging from courses and seminars to conferences. They produce educational materials, help students meet with industry leaders, and help them develop relationships for internships and job opportunities.

HOW TO CONTRIBUTE

This column will be a vehicle for IT students to build stronger relationships within industry, government, and academia. IT Pro will aim to serve as the connecting hub for these relationships by publishing articles about subjects in which students are involved. These areas of interest include (but are not restricted to):

- experiences and opinions/details on internship programs (in general or in particular);
- IT university curricula and its impact on how students relate to industry;
- new types of IT careers outside academia;
- the role of IT graduate and undergraduate students in industry and government;
- IT students in academic and scientific programs and activities;
- IEEE Student Chapter activities, experiences, and outcomes;
- specific students’ experiences in their work;
- government and industrial programs related to IT students; and
- IT learning and the impact of distance learning on IT students.

Submit your ideas for articles to gustavo@lifia.info.unlp.edu.ar or mjescalona@us.es. Columns are relatively short—no more than 2,500 words (including figures and tables, which are considered 250 words each). For style guidelines see www.computer.org/cms/Computer.org/Publications/docs/2016CSStyleGuide.pdf.
REFERENCES


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