ACM 2020-2021 Student Chapter Excellence Awards Application

For Application Guidelines, see https://www.acm.org/chapters/student-chapter-excellence-awards

Award Category: Outstanding School Service

Chapter Name: *

Universidad Panamericana ACM-W Student Chapter (185976)

City: *

Mexico City

State/Province:

Mexico City

Country: *

Mexico

Outstanding School Service: Chapter Contact Information

Please provide all required information

URL for your Chapter homepage: *

For example, https://www.acm.org

https://www.upacmw.com

Facebook:

@upacmw (https://www.facebook.com/upacmw)

Who is submitting this application? *

Enter Submitter's name

Sarahí Aguilar González

Submitter's Email: *

Enter Submitter's email

0189970@up.edu.mx

Faculty Sponsor Name: *

María de Lourdes Martínez Villaseñor

Faculty Sponsor Email: *

lmartine@up.edu.mx

Outstanding School Service: Chapter Achievements

Provide brief descriptions as requested, and stay within the character limit for each

Please provide a brief description of your chapter and school (1500 character maximum) *

Universidad Panamericana (UP), Mexico City (www.up.edu.mx/en)
UP was founded in 1967 as a business school. As a university, it now has 4 campuses with more than 12 thousand students. The first campus in Mexico City was established in 1968.
Almost 41 years after its foundation, the Engineering School of UP in Mexico City campus offers 6 undergraduate programs and 11 graduate programs. There are currently 1212 students enrolled in them, from which only 33% are women.
UP ACM-W members are female Engineering students of UP in Mexico City campus. Consolidated on September 14th, 2020, it became the first ACM-W student chapter in Mexico and Latinamerica. This has been a challenge that entails a lot of work and responsibility, but that we have enjoyed with great pride.
Our mission is to diffuse, celebrate and support the participation of UP women in Science, Computing and Engineering through opportunities that enrich their academic and professional careers, as well as their personal growth. Our vision is to use our enthusiasm for these areas to build an exemplary community for women by providing a space for learning, growth, expression and exchange.
Today UP ACM-W has 23 active members involved in more than 6 projects and 4 multidisciplinary teams. Having reached more than 70 female students with our events and social media, UP ACM-W is known by 33% of all female students (411) in the Engineering School of UP in Mexico City campus only in less than 7 months since our consolidation.

Outstanding School Service Essay Guidelines (4000 character maximum) *

Tell us about projects that help your fellow students, your department, or your school in general - you may list a maximum of 4. Please ensure to enumerate each one and place in order from oldest to newest. Tell us about each project including: the date (add end date if it was multiple days), how many people participated, and how it helped your fellow students, your department, or your school in general. If you have web pages for these projects, include the URLs. (Note, if you have worked on projects to help other schools, for example neighboring high schools, apply for the Community Service award rather than the School Service award.) Please be sure to use your chapter's official name - do not refer to your chapter as 'ACM,' 'ACM-W' or 'WICS.' Please note, links to essays will not be accepted and will disqualify your chapter.

Context

One of the main subjects of interest of the members of UP ACM-W is Data Science. Therefore, since the very beginning we created a team (dependent on our student chapter) conformed by members who wanted to work altogether in a Data Science project.

This team is conformed by 3 UP ACM-W active members and leadered by (1) the chapter's Chair, who studies a masters degree in Data Science and works professionally as a data scientist, and (2) the chapter's Vice-chair, who studies a postgraduate program in Project Management and works professionally as a project manager in technology companies.

This team allows students to explore a career they are interested in, put into practice skills they have learned at university up to now and gain new soft skills and hard skills relevant in the Data Science professional domain. All this in a safe environment with the mentorship of those who already have real-world professional experience.

Background and objectives

Mexico's higher education system has experienced significant growth in recent years. This has had a direct impact on the competitiveness of the Mexican universities market, particularly those of the private subsystem. And since the private subsystem of Mexican universities is an extensive and diverse ecosystem, the institutions that belong to it, such as Universidad Panamericana (our university), find it necessary to come up with new strategies for recruiting students.

With all this in mind, UP ACM-W Data Science team decided to collaborate with the heads of the departments of Public Relations of the three campuses of Universidad Panamericana, which are in charge of the development and implementation of new student recruiting strategies, in order to build a data-driven digital tool that could allow them to identify which high schools in Mexico could be targeted to offer new, more or better academic opportunities to their students.

The proposed solution was a data visualization dashboard in which the user can analyze, visualize and segment at high school level and in an easy and fast manner historical data of applicants and students of the Universidad Panamericana.

This solution is thought to become part of the everyday decision-making tools of the staff of the departments of Public Relations of the four campuses of Universidad Panamericana and increase on a 10% the number of applicants to Universidad Panamericana nationally by January 2022.

Development

For this project we used three databases: two provided by our school and one of public domain. We began the development process at the beginning of December 2020 with a stage of data preprocessing.

Once we had the three databases neat and clean, we began the prototyping stage. We chose the best ways of visualizing the data at issue based on the necessities of the stakeholders, and with the help of prototyping tools, we were able to build an initial proposal of how the different modules of the dashboard would look like and what insights the stakeholders could be getting from them.

Once our prototype was approved by the stakeholders at the end of January 2021, we started coding. We used Shiny, an R package that allows the coding of interactive web apps straight from R. The deployed version 1.0.0 of our dashboard has 5 different analysis modules, is hosted on the open web and includes an

authentication administrator. For privacy concerns, we aren't able to give access to people that aren't staff from our school.
The release and final presentation of this project was on March 18th of 2021. The invitees of this presentation included 5 directors at the Public Relations departments of all campuses, the director of the Engineering School at our campus and one academic advisor of UP ACM-W. In this presentation our whole team hosted a live demonstration of the dashboard in which we followed professional best practices to demonstrate software to customers in a compelling, engaging, and differentiating manner.