Tatiana Castro Vélez

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Education

CUNY Graduate Center   **August 2020-Present**
- Computer Science Ph.D. student
- GPA: 3.85

University of Puerto Rico, Río Piedras Campus   **August 2016-May 2020**
- Major: Computer Science
- GPA: 3.73/4.0; Major GPA: 3.80

Experience

CUNY Graduate Center   **August 2020-Present**
Research (Graduate Research Assistant)
- Area: Software Engineering, Programming Languages
- Advisor: Raffi Khatchadourian, Ph.D.
- Member of PONDER Lab

Hunter College   **August 2021-Present**
Instructor (Graduate Teaching Assistant)
- 2022 Summer Term Software Analysis and Design 3 CSCI 33500 (Undergraduate)
- 2021 Fall Term Advanced Applications: A Capstone for Majors CSCI 49900 (Undergraduate)

Teacher Assistant (Graduate Teaching Assistant)
- 2022 Fall Term Software Analysis and Design 3 CSCI 33500 (Undergraduate)
- 2022 Spring Term Software Analysis and Design 3 CSCI 33500 (Undergraduate)

Internships

Rock Solid Technologies, San Juan, PR   **June 2019 - Present**
- Worked as a software engineer in the ERP Private Sector of the Company.
- Worked on technical support cases for different clients that use Microsoft GP and Microsoft AX 2012.
  - Added code customizations to Microsoft GP and Microsoft AX 2012.
  - Automatized financial reports for our clients through code.
- Worked with the client's databases by creating stored procedures, views, jobs, etc.

Start Internship at Pricewaterhousecoopers (PwC), New York Office   **June 2018 - July 2018**
- Assumed a lead role in project managing my team's site rebuild.
- Identified opportunities to enhance the team's approach and brought my point of view to the team.
- Helped accelerate the build of the site page under a tight deadline in order to keep the team on track for the release to all the 50,000 US partners & staff.

University of Puerto Rico, Río Piedras Campus

Research Experience   **January 2018 - Present**
- Developed an iOS mobile application as a tool for the investigation called "Momentary Assessment for Research-centered Learning Environments".
- Used the framework called "ResearchKit" for the application.
- Wrote an article called "Importance of frameworks in a software development project: An inside look to the use of a framework for a mobile software development through Research Kit and Research Stack"

Research Experience   **August 2017 – May 2018**
- Used LuaTex in order to draw certain knots (topology) so that we could have better visualization of the knot.
- Created a Python program where given the knot crosses of a particular knot, you can automatically calculate its Alexander Polynomial.

Publications

*(My name is in **boldface**)*

Conference Publications (Peer-Reviewed)
- Raffi Khatchadourian, **Tatiana Castro Vélez**, Mehdi Bagherzadeh, Nan Jia, and Anita Raja. Towards safe automated refactoring of imperative Deep Learning programs to graph execution. In *International Conference on Automated Software Engineering*, ASE '23, Kirchberg, Luxembourg, September 2023. IEEE/ACM. (25/70; 35.7% acceptance rate). To appear.
- **Tatiana Castro Vélez,** Raffi Khatchadourian, Mehdi Bagherzadeh, and Anita Raja. Challenges in migrating imperative Deep Learning programs to graph execution: An empirical study. In International Conference on Mining Software Repositories, MSR '22. ACM/IEEE, ACM, May 2022. (45/138; 32.6% acceptance rate).

Leadership & Activities

Academic

2022 CRA-WP Grad Cohort for Women Workshop, *New Orleans, LA, US*   **April 2022**

Computer Science Student Association, President   **August 2016 – July 2020**
- In charge of developing CS activities such as workshops, conferences, panels or interactive activities.
- Being a link between the students and the CS Department.

Include Girls, President   **August 2015 – July 2020**
- Developed activities where the mission was to promote more diversity in STEM.
- Created a space where diverse entities feel comfortable.

Computer Science Education for the Community
- Administered an Hour of Code for thirty high school girls in order to spark interest in Computer Science and bring their attention to the importance of technology in our current times.
- Administered a training for sixty high school teachers around all of Puerto Rico which consisted of an Hour of Code that they would teach their students afterwards.
- Arranged a panel of Women in Technology where these professional women would talk about the difficulties and challenges of being a woman in tech and the importance of perseverance.

Reviews

Reviewer for ISSTA AE   **2023**
Subreviewer for FSE Demos   **2023**
Subreviewer for IEEE TSE   **2022**
Reviewer for Programming Artifacts, Vol 7   **2022**

Competitions & Scholarships

Competitions

Participated in Poster Competition   **October 22, 2021, CUNY Graduate Center**
Participated in ACM-ICPC Caribbean Final 2018   **November 10, 2018, UCNE Dominican Republic**
Silver Medal in ACM-ICPC National Contest 2018   **October 6, 2018, University of Puerto Rico, Mayagüez Campus**
Silver Medal in ACM-ICPC Caribbean Local Contest   **September 22, 2018, University of Puerto Rico, Río Piedras Campus**
Gold Medal in ACM-ICPC Caribbean Local Contest   **October 1, 2016, University of Puerto Rico, Río Piedras Campus**

Scholarships

CUNY GC/HC Fellow   **August 2020-Present**
Gauss Award   **May 2020**
- Undergraduate: Awarded to the student with a major in CS with high academic achievement and demonstrated commitment in the research area, they stand out for being a great promise in the area of their specialty.

Rock Solid Technologies Scholarship   **October 2019**
Claude Shannon Scholarship   **August 2017 - May 2018**
- Funded by NSF through "Scholarship fund for excellence in Computer Science and Mathematics"

Presentations

Conference activities and participation

Mining Software Repositories (MSR)   **Pittsburgh, PA, US**
- Challenges in migrating imperative Deep Learning programs to graph execution: An empirical study. May 2022. Presentation (*15 min*)
- Challenges in migrating imperative Deep Learning programs to graph execution: An empirical study. May 2022. Poster Presentation.

Skills

- **Technical:** C++, X++, Python, Java, SQL, Swift, HTML, CSS, PHP, Linux, Microsoft GP, Microsoft AX 2012, Microsoft Office, Mac OS, Windows, Google Docs
- **Languages:** Native Spanish and English speaker