

Experience

uBridge Founder

2021 - Current

- Founded 501(c)(3) nonprofit on a mission to bridge the diversity gap in STEM empowering youth in 6+ countries.
- Authored and published 105 page *Hola Mundo: Inteligencia Artificial para Ninos* book in Spanish for Hispanic teens to think critically about Artificial intelligence in society.
- Developed curriculum to empower 1200+ innovators through weekly clubs and runs workshops exploring the convergence of 2 STEM disciplines at a time.
- Helped run 400+ person Ecuadorian heritage event with STEM workshops.

Pennsylvania Governor's School for the Sciences at Carnegie Mellon Researcher & Alumni Communications Coordinator

2023 - Current

- 1 of 71 students in PA (<17%) selected to attend rigorous, fully-funded 5-week residential program taking college-level courses with Carnegie Mellon faculty.
- Conducted and published 29-page neurophysiology research on neurodegeneration using model organisms with a team.
- Developed laboratory techniques (PCR analysis, plasmid DNA isolation, electrophoresis gel procedures, experimental data analysis, selective markers) and detected GMOs in bioengineering lab.
- Currently creates content connecting 2,800+ PGSS Alumni on various communications & social media platforms.

Youth Volunteer Corps

International Youth Advisory Board Member

2022 - Current

- 1 of 20 youth representing 300k student volunteers globally creating service projects to connect global affiliates.
- Produces and co-hosts *the Powerful Youth Perspective Podcast* found on Spotify interviewing youth activists across the nation.
- Distributed 120 care packages for homeless youth and edited video about local resources shared in 12+ schools.
- Allocated \$15k in grants to 2 Berks nonprofits after reviewal process.
- Devised activities as a Programming Committee member for the nationwide Youth Volunteer Corps Summit in Tulsa, Oklahoma.
- Founded Stand Together Against Racism (STAR) club.

Society of Women Engineers

International National SWENext Influencer

2022 - Current

- Developed agendas and gave educational talks about engineering at 3+ meetings speaking to 100+ aspiring young women engineers internationally.
- Developed communications content to give engineering-based content and college access information to 1500+ people.
- Wrote for the SWE blog and international newsletter about being a Latina in STEM.

Penn State University-Berks

Computer Science Teacher Asistant

2023 - Current

- Assists teaching by creating C++ and java programs for CMPSC 201 and CMPSC 101 university classes.
- Helps with topics such as for loops, tracing code, method creation, data types, equality operators, etc.

Luna Co.

Founder

2021 - Current

- A tech business formulated with a business plan, projected growth, target audience, marketing strategies to address sleep health with a circadian rhythm-measuring app and bluetooth, motion sensitive rug prototyped with 3D printing using CAD.
- Received 1st in a business pitch capstone competition to 6+ investors.

Emerging Entrepreneurs Academy, Alumni Association

Co-president & founding member

2021 - Current

- Selected to be in inaugural class for intense 6 week, fully-funded program for future business leaders.
- Grew Alumni Association by organizing 60+ aspiring business leaders and by hosting events.
- Helped grow the academy with business strategy and spoke in schools to help secure a partnership with Penn State-Berks.

PA Youth Advocacy Network & Jewish Healthcare Foundation

2021 - Current

Head of Tech & Education Outreach Committee

- Led 20+ meetings with the PA School Principals Association and Representative Kane, Schwank, and Nelson to author Senate Bill 866 introduced in session to address mental health excused days in PA schools.
- Gave a speech at the Harrisburg Capitol press conference on disparities in Latino access to health care.
- Organized an advocacy day at the Capitol in Harrisburg for 100+ youth.
- Co-authored 2 proclamations, one signed by Governor Shapiro and the other by Berks County Commissioners, to proclaim May 23rd as youth mental health awareness day.
- Sparked interest in AI-enabled neuroimaging to find psychiatric biomarkers to improve equitable diagnosis.

Education

Wyomissing Area High School I Reading, PA

Sep 2020 - Expected Graduation May 2024

- **Rank:** 1st I GPA: 5.45
- **Re-elected Class President (2022-2024)**
 - Coded html website to create a platform for inter-club collaboration and founded school-wide inter-club council.
 - Designed, managed finances, and distributed 440+ class shirts.
 - Created 40+ digital flyers and produced videos for 12+ clubs and 3+ websites for school organizations.
 - Reintroduced student-run recycling (500+lbs)
 - Opened Spanish Club membership to integrate ESL students into school community.
 - Ran book drive partnering with a NGO donating 100+ books to youth in Peru
- **Student school board representative:** represented 650+ students bi-monthly
- **Wyomissing Internships:** Honors chemistry teacher assistant (2023-2024); Communications intern (2022-2024)
- Varsity track and field (co-captain), Spanish Club (President), Sociedad Honoraria (President), Service Club (Vice-president), Mini-Thon (Head of Communications Committee), Math Club (Secretary)
- **Independent project:** engineered self-automated photovoltaic system, conducted research on solar panels material, and began the solar transition process at the Wyomissing School District {<https://tinyurl.com/3ctv5fjc>}

Awards/Honors

- National Winner, National Center for Women & Information Technology (NCWIT) (<1%; 40 of 3,300), 2024
- Regional Finalist, Coca Cola Scholar Foundation (<0.2%; 250 of 103,000), 2024
- Gold Winner in Technology, Hispanic Heritage Foundation (<1%; 300 of 30,000), 2023
- Hispanic Scholarship Fund Scholar (<6%), 2023
- Gold President's Volunteer Service Award (for 450+ hours of service), 2023
- National Hispanic Recognition Program, CollegeBoard (<2.8%), 2023
- Yale Young Global Scholar & Selected Speaker (<11%), 2023
- Philadelphia Union League and Eastern Pennsylvania Youth Soccer Good Citizenship award, 2023
- Hugh O'Brian Youth Leadership (HOBY) Foundation Alumni & Scholarship Semi-finalist, 2022
- International Recognition Bebras Computing Competition, 2021

Publications

- *Hola Mundo: Inteligencia Artificial para Ninos* (Amazon)
- *Investigating the Impacts of Environmental Factors on Neuron Function Using L. terrestris and C. elegans* (2023 Journal of the PGSS)

Links:

- uBridge: ubridges.org
- LinkedIn: www.linkedin.com/in/vanesa-aguay
- YouTube Channel: <https://tinyurl.com/4txrvhkf>

Skills

- Native Spanish Speaker
- Java, JavaScript Python, HTML, C++, CSS
- Bioengineering lab skills
- Experience with ArcGIS, TensorFlow, Final Cut Pro, VS Code, Arduino, Spark
- American Red Cross Lifeguard Certified