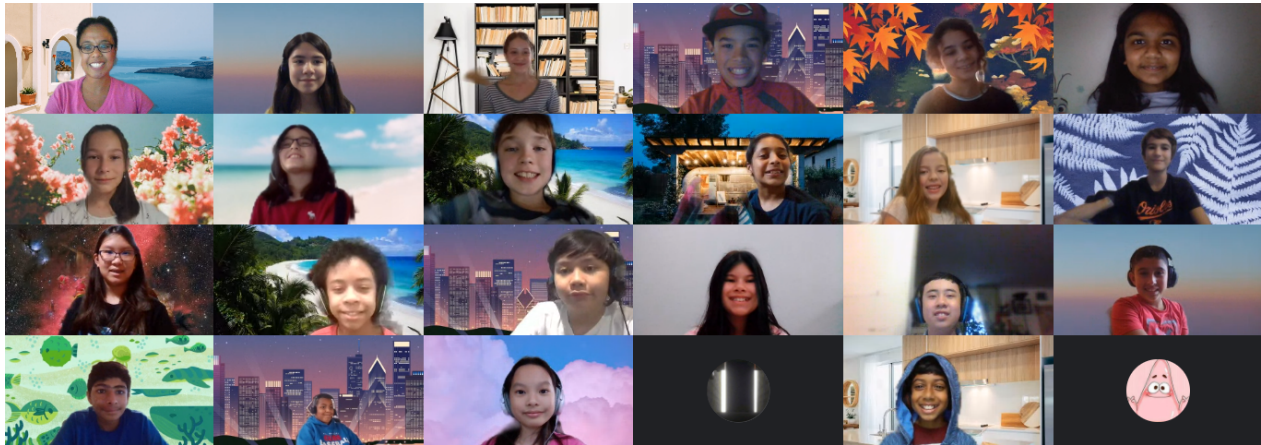




Raising **E**xcitement for **S**cience,
Engineering, and **T**echnology

STEM Volunteers Inspiring Children
Through Hands-On Learning



2020 Annual Report



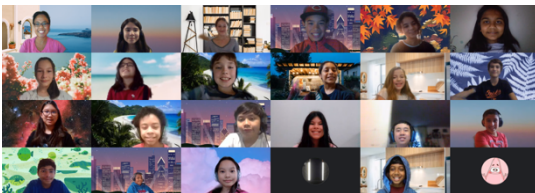
Table of Contents

3. Executive Director Message
4. Profile: Teacher Joan Swanson
6. Financial Report
7. RESET Schools and Community Service Partners
8. Profile: Volunteer Ujjawal Savani
10. RESET Volunteers
11. RESET Funding Support
12. RESET Board and Staff

RESET is a volunteer organization of science, technology, engineering, and math (STEM) professionals whose mission is to motivate children to discover and explore the worlds of science and math, and to encourage them to consider education and career choices in related fields



www.resetonline.org



Cover Photo: Sixth grade on-line RESET class at Fairhill Elementary School in Fairfax, Virginia

Reflecting Upon 2020

A Message from RESET's Executive Director

In Japanese the word crisis has two characters – the first means danger and the second means opportunity. During the Coronavirus crisis of 2020, RESET faced danger to our mission as schools closed and community organizations suspended youth gatherings. Since all of our programs have involved face-to-face interaction with children, we encountered the prospect of abrupt interruption of our activities.



RESET volunteers strive to imbue the skills of innovative thinking and collaborative teamwork in children through hands-on STEM activities. These same qualities were brought to bear by our staff and Board of Directors as we deliberated upon ways to respond to 2020's changed circumstances. Like schools nationwide RESET moved our programs to on-line learning, bringing in the second Japanese meaning for crisis by pursuing two such opportunities.

The first involves teaming up volunteers with teachers to lead hands-on STEM sessions for students as part of their on-line school-day learning. To make this feasible RESET worked with our schools to ensure students received the materials for the science experiments in their homes. RESET also increased the number of lessons in a program from our past practice of six to as many as eighteen, helping to build strong connections between students and their STEM professional volunteers despite the lack of face-to-face interaction. These connections bolster students' views of their volunteers as STEM role models.

The second challenge was to modify RESET's computer science program for Girl Scouts for on-line presentation. This was designed as a two-step program – in the first weekend session, STEM professionals teach teen Scouts digital science topics such as coding and robotics and also prepare them to coach younger Scouts. The second session brings in the younger Scouts to learn from teams of the trained teens and RESET volunteers. While work with robots and drones could not be included in the virtual programs, the fundamental hands-on experiences in programming and animation continued. One hundred Girl Scouts have participated in the on-line programs.

RESET is exploring incorporating virtual sessions into our traditional programs. While in-person visits will remain the essence of what we do, we may be able to reach more students if volunteers can include both classroom and virtual sessions. This would be particularly helpful for DC schools where long commuting times for volunteers limit the number of school visits that are practicable.

I am grateful to all those who helped RESET adjust rapidly to the changed circumstances in 2020. While we look forward to returning to normal operations that reach more students, we are pleased that our volunteers continued to reach students during the pandemic.

Keith Osterhage, Executive Director

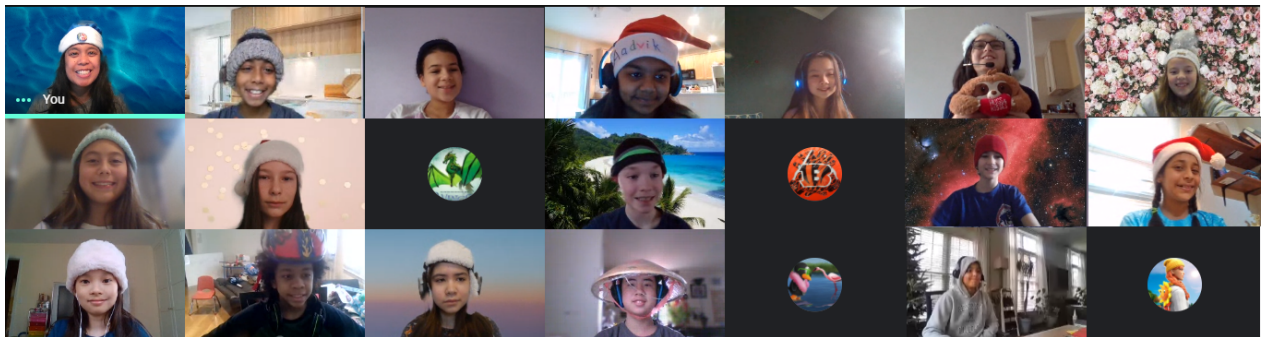
Teacher Joan Swanson

Making RESET Work in the On-Line Classroom



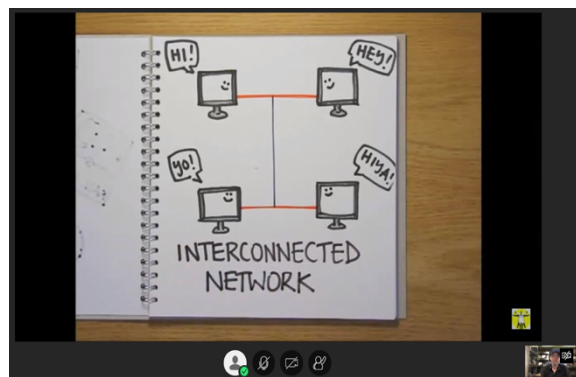
Fairhill Elementary teacher Joan Swanson says that an affinity towards education runs in her blood. In the Philippines both of her grandmothers were teachers, a great-grandfather was a principal, and a grandfather was a school superintendent. Early in her career Joan taught in California and first experienced RESET after relocating to Northern Virginia. Then teaching at Pine Springs Elementary in Falls Church, she hosted RESET volunteer Rich Replier in her classroom, where he led lessons in sound with his fascinating array of acoustical equipment.

Now at Fairfax’s Fairhill Elementary, Joan continues her RESET partnership, having volunteer Bill Mitchell working with her sixth-grade STEM class of 25 students. Early in spring 2020 Bill visited her classroom to lead the students in his computer science program that includes programming in Scratch, Python and other languages. Joan reports that Bill made the transition to on-line teaching in March easy for her students, all of whom had a school-provided laptop and wifi boosting if needed.



Joan Swanson’s sixth-graders don headgear for a RESET class

Joan values the interaction with the students that Bill’s lessons affords. She monitors the questions and observations that they pose in the Chat Box and welcomes the opportunity that students have at the end of the sessions to showcase their work to their classmates. This sharing of results prompts students to ask their peers how they were able to program their animations to achieve certain effects. This collaboration on higher-level skills is an important part of Joan’s approach to STEM education.



A slide from Bill Mitchell’s program

In teaching you sometimes don’t get to see your results until years later, Joan says, and then only if you cross pathways with a former student. RESET brings to students an immediate appreciation of the reasons for learning – the practicality of how it will be used in later life.

Joan has been recognized for excellence in teaching, including by Teacher of the Year awards. A memorable example was when she was presented an award by Fairfax County that was accompanied by



Data pathway slide

a catered lunch for the entire staff and a cake for her class. Over the past decade Joan's life pathway has followed a pattern - just after receiving such recognition, she must regretfully tell her Principal that circumstances are taking her to a new school. When each such change occurred, the timing has been such that a pregnancy and new baby ensued thereafter. After three such iterations, Joan found herself during this Covid-affected point in time balancing having her twelve, nine and three year-old children at home with her while

schooldays involve teaching as many as 27 students in her virtual classroom. Joan has an amazingly upbeat attitude through these challenges – it helps having teaching in the blood.

Joan Swanson's Students' Memorable Moments With RESET Volunteer Bill Mitchell

"...a silly moment was when half of our colleagues forgot their passwords, (I am not pointing fingers, I did too.) I like our coding sessions, because we learn how our world is going to be in the future." Adithi

One moment that stood out to me was looking at other's projects and seeing how diverse they were in a creative way from the help of Mr. Mitchell. Savannah

"He always helps people when people need help or having trouble." Devan

"I like the coding session because it is fun and it makes you think." Aaron

"There have been so many great moments that I've enjoyed with Mr. Mitchell. I LOVED learning about binary numbers and how computers work. He made coding really fun in general and enjoyable. All his lessons had something I enjoyed!" Andrea

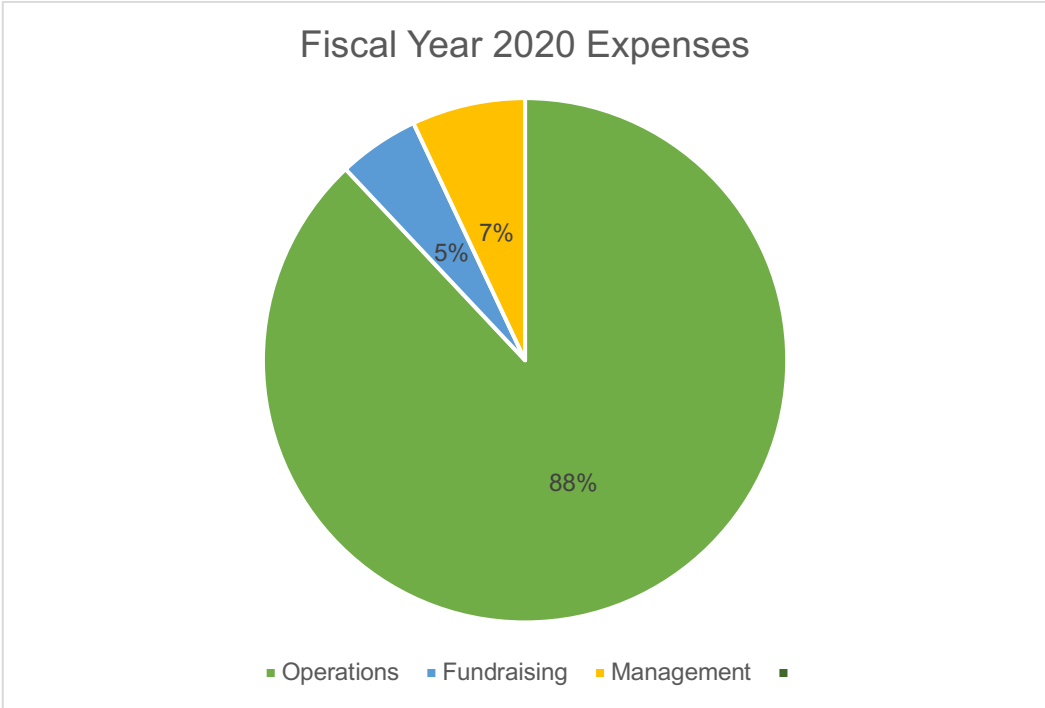
"I really liked learning new things on Scratch. I had never ever used Scratch before coding so it was a new experience for me. I also remember one time when Scratch was down for everybody in our class but Mr. Mitchell. He was doing his lesson on Scratch while we were still trying to get Scratch to load! "Are you guys following along?" He would ask. "No, we can't even get on Scratch!" someone else would reply. Overall coding was so fun and something I will never forget!" Charlotte

Financial Report

In Fiscal Year 2020 RESET received \$101,362 in financial contributions and incurred \$127,447 in expenses, resulting in a decrease of \$26,085 in net assets.

The Coronavirus pandemic brought not only program challenges to RESET during 2020, but also changes in the financial landscape. The operations of many of RESET’s past funders were affected by the uncertainties the year brought. With a lower level of income RESET faced difficult decisions on reducing expenditures, identifying as priority investments those that enabled rapid and fundamental accommodations to the changed learning environment for our students. While expenses exceeded income for the year, this was necessary to adapt to the new realities and RESET maintained \$83,150 in net assets at the end of the fiscal year.

Because our volunteers donate their time and expertise, and community partners contribute their time, donations to RESET are highly cost effective. RESET expenses include staffing, classroom skills training, field trips, classroom materials, fundraising, communications and liability insurance. For information on making a contribution, visit www.resetonline.org



RESET Schools and Community Partners

RESET is grateful to our partner schools and community service organizations that help us deliver hands-on STEM learning to children.

District of Columbia

Excel Academy—Ward 8
Harmony Public Charter—Ward 5
John W. Ross Elementary—Ward 2
Lawrence E. Boone Elementary—Ward 8
Plummer Elementary School – Ward 7
Shaw Center City Public Charter—Ward 6
2020 Whittier Educational Campus—Ward 4

Maryland

Girl Scouts of America – Montgomery County

Virginia

Barrett Elementary
Buckland Mills Elementary
Camelot Elementary
Canterbury Woods Elementary
Cora Kelly Elementary
Drew Model School
Ellis Elementary
Fairhill Elementary
Girl Scouts of America - Ashburn
Girl Scouts of America – Reston Glebe Elementary
Hoffman-Boston Elementary
Hutchinson Elementary
Kings Glen Elementary
Sugarland Elementary

Check out RESET's new introductory video at: <https://www.youtube.com/watch?v=gr1zTBMUG0Y>

Volunteer Ujjawal Savani

Mentorship Matters

As a child RESET volunteer Ujjawal Savani attended a Title 1 school serving a large number of students from economically disadvantaged backgrounds: “Environmental influences helped me to succeed – my father was my mentor and led science experiments at home.” He remembers one in which family members coasted downhill on bikes to observe the effect of body weight on bike speed. Ujjawal was born in Kuwait; after relocating to the US his family spent time in Arkansas, Massachusetts, Maryland and Tennessee. He is now a research fellow at the National Institutes of Health in Bethesda, Maryland and his professional goal is to become a medical doctor.



Ujjawal Savani

At NIH Ujjawal learned of a volunteer organization called Curiologie in the Classroom, which teams with RESET to lead STEM activities for students at a Title 1 school in Washington DC. He joined because he wants to serve as a mentor to children who may not have the advantage of a parental mentor. Ujjawal says it’s “really fun teaching these kids and watching their enthusiasm – it’s awesome to see them grow.”

The Curiologie team has led programs for years at DC’s Shaw School and more recently expanded to Brightwood Education Campus, another Title 1 school in DC. This year, in partnership with the Children’s Defense Fund, programs were added at Boone and Plummer Elementary Schools in Southeast DC, which



Before going virtual, Ujjawal’s Curiologie-RESET team worked in classrooms at DC’s Shaw School

serve under-resourced neighborhoods. Early in the spring term classes were proceeding normally until the Corona virus shutdown. Their students already understood infection pathways, having previously had a lesson on germs that included a game of viral tag with stickers denoting which of them were “spreaders.”

With RESET’s Sherri Kohr, Ujjawal and his team retooled their program to work virtually with students. Sherri prepared boxes of materials that the schools helped distribute to the students and the Team led the experiments on Zoom. Sessions have included making flutes with straws, lifting a salted ice cube with string, and

testing the carrying capacity of model boats made with aluminum foil. Ujjawal's colleague Marquis Chapman is developing additional lessons on computer hardware, including central processing units, Rapid Access Memory sticks and hard drives.

Ujjawal relates a mentorship moment when one of his students in a Zoom session asked about the lab bottles behind him. Ujjawal explained that they contained chemicals for his research in immunology, which piqued the student's interest and led to additional discussions between them about how to become a lab scientist.

In addition to his work with students, Ujjawal chairs the Curiologie Board of Directors and is a member of the RESET Board.



Check out #RESETuesday videos for experiments appropriate for children at home:
https://www.youtube.com/playlist?list=PLm0u_BSlYOpJxbVXZucrnPT1naXq2b0Qf

RESET 2020 Volunteers

Madie Alexander
Michelle Basden
Thomas Clarity
Tammie Confer
Lee DeCola
Christopher Dolce
Dominique Douglas
Mina Ekramnia
Amber Fandel
Claire Gao
Arthur Hall
Casey Hummeldorf
Rajani Joglekar
Chris Jones
Ujwala Joshi
Yingquan Li
Lyndsay Maggin
Brianna Matthew
Kelsie Medina-Saenz
Rochelle Mellish
Rebecca Mickol
Kayla Miller
Bill Mitchell
Priscilla Nwosu
Alice Robie
Ujjawal Savani
Harkiran Singh
Harold Smith
Peter Sowa
Halyi Spence
Jeremy Taigman
Sharaya Tulpule
Juan Valentin
Serena Vilasi
Loreen Weatherspoon



RESET partners with government, private sector and non-profit organizations that provide teams of volunteers to deliver RESET programs:

- Curiologie in the Classroom
- The Environmental Protection Agency
- General Dynamics
- The Howard Hughes Medical Institute
- The National Oceanic Atmospheric Administration
- The U.S. Patent & Trademark Office

RESET Funding Support

RESET relies upon the generosity of foundations, private companies and individuals for the funds that support our work, and we are deeply grateful to those who enabled our continued operations in the difficult 2020 environment.

Community and Family Foundations

- Benjamin Wallace Trust
- Boothe Family Fund
- The DECK Foundation
- Morris and Gwendolyn Cafritz Foundation
- Community Foundation of Northern Virginia
- Marilyn T. and David R. Heebner Foundation, Inc.
- Kerst Charitable Fund
- Richard E. and Nancy P. Marriott Foundation
- Mufson Family Foundation
- Luther I. Replogle Foundation
- Silicon Valley Community Foundation

Corporations

- General Dynamics

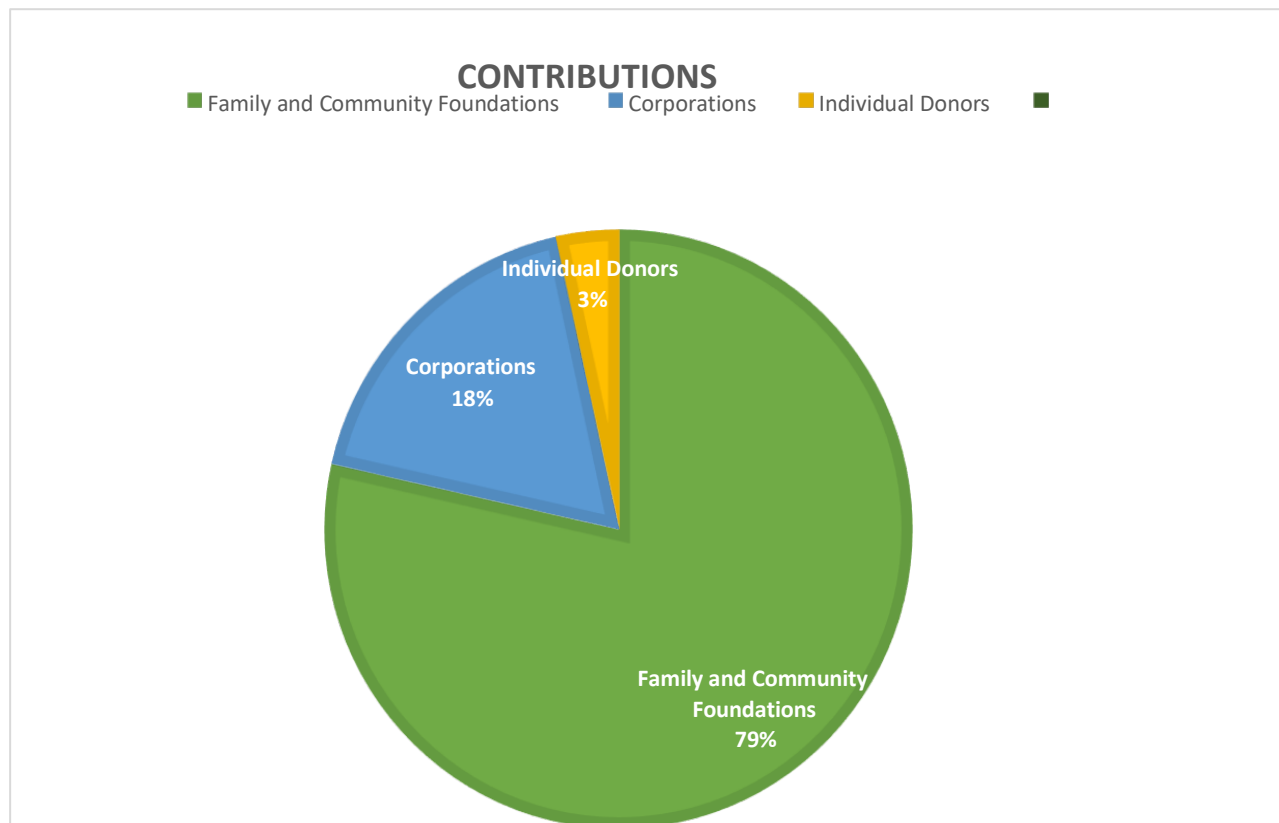
Individual Donors

- Jose Arias
- Claudia Austin
- Nina Barcelli
- Bruce Cork
- Ryan Dunning
- John Ehrhart
- Brian Gaines
- Roberta and Morton Goren
- Jonathan Hollm
- Sherri Kohr
- Jinqi Maorise



Individual Donors (continued)

- Lewis Mendelson
- Sujata Nandi
- Ashley O'Neil
- Adeoye Owolewa
- Ujjawal Savani
- Julie Schechter-Torres
- Jim and Katie Sebastian
- Rachel Sharlin
- Gideon Sorkin
- Juan Valentin
- Christa Weber
- David Meagher
- John Meagher
- Oscar Wiygul



RESET Board and Staff

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- Salim Adogo, DC Neighborhood Advisory Commissioner, Ward 8, Washington, DC
- Claudia Austin, Teacher, Richard Montgomery High School, Rockville, MD
- Nina Barcelli, Science Curriculum Designer, Washington, DC
- John Meagher, RESET Communications, Fairfax Station, VA
- Lewis Mendelson, Board Chair, International Capital Market Consultant, Bethesda, MD
- Keith Osterhage, RESET Executive Director, Fairfax Station, VA
- Adeoye I. Owolewa, RPh, Pharmacist Washington, DC
- Ujjawal Savini, Research Fellow, National Institutes of Health
- Sheila Tobias, Author and Educator, Tucson, AZ
- Katie Vollmer, National Institutes for Health Fellow, North Bethesda, MD
- Christa Weber, Teacher, Crestwood Elementary, Springfield, Virginia

Advisory Committee

- Noradeen Fariakas, Chartered Financial Analyst, Fairfield, CT
- Brian Gaines, Nonprofit Chief Executive Officer, Gaithersburg, MD
- Jon Simon, Mathematics Professor Emeritus , Potomac, MD

Staff

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- Sherryl Kohr, Volunteer Classroom Skills Advisor, sherri.kohr@gmail.com
- John Meagher, Publications, johnmeagh@gmail.com
- Shreya Nandi, Digital Communications, guardianp53@gmail.com



Seated: Lew Mendelson; Standing from left: Ramiro Ramirez-Valdez, Katie v vollmer, John Meagher, Salim Adogo, Jon Simon, Adeoye Owolewa, Keith Osterhage



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