

# girlTech Women in STEM

Feb 2024 • Issue 3 Vol. 2

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# Ruth Handler

Behind & Beyond Barbie

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Dearest Reader,

Welcome to *GirlTech Magazine's* Winter 2023-24 issue!

This is the final issue of our current masthead, which mainly consists of the founding members from Spring 2022. It is with sincere gratitude and bittersweet pride that we present the culminating product of the past three years of endeavor.

*GirlTech Magazine* has grown in many ways through the past seven issues. We've been blessed with the diverse voices from our writers and dedicated editors who strive to make high-quality information accessible to the entire school community. Throughout the creation process, we have fostered a community of women in STEM and allies who work together to pave the paths for a hopeful future.

Our guiding principle is candid discussion and equitable empowerment. In every issue, we strive to present content in six different categories to the highest standard. Our unique visual identity comes from a dedicated design team that strives to make technical information digestible and enjoyable. Every detail on the page is of meticulous design and represents hours of hard work behind the scenes.

We are forever grateful to our editorial team, our adviser Ms. Meghan Healey, the GirlTech club, and other supporters who have been here for us ever since the conception of this magazine. As we pass on the baton to the next generation, we hope that the spirit of empowerment will live on. With every issue, our goal is to reach a larger part of the community, differing in gender, age, and academic interest.

Together, we will empower, encourage, and educate.

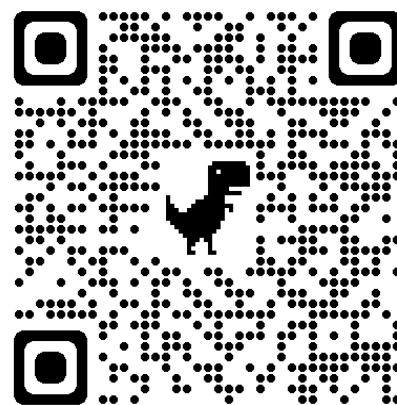
Singing off,

Yoyo Zhang '24, *Editor-in-Chief*

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Scan to read!

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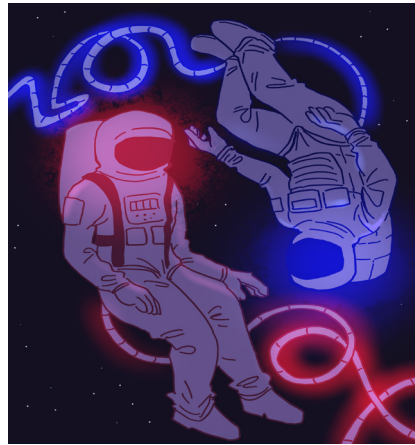
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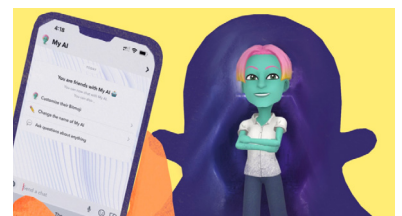
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Submit article ideas to  
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# Meet the Team

2023-2024 GirlTech Masthead



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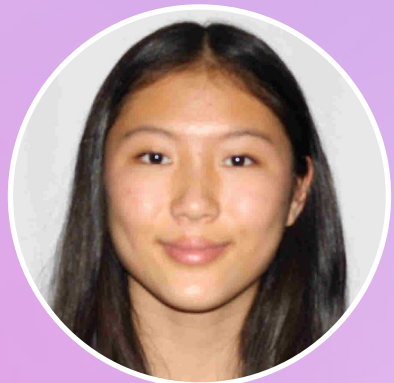
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## OUR MISSION

Empower women and other people of marginalized genders in STEM through recognition, education, and advocacy.

## GET INVOLVED

Email any of us to join GirlTech Club's email list and sign up for an article! We welcome everyone.



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# America's Avocado Revolution: An Overview

By McCormick Breviu '25

From avocado toast to guacamole, America was not always obsessed with avocados — skillful marketing techniques have largely been behind this fruit fad.

In the early 20th century, avocados were referred to as “alligator pears” due to their scaly peel and pear shape. From a marketing standpoint, the nickname did not make avocados appealing to consumers. In 1914, the United States banned Mexican imports of the fruit because of low American avocado sales and a fear that Mexican avocados carried pests. In 1915, the California Avocado Grower's Exchange petitioned to formally adopt the word “avocado” for the fruit, making them sound more appealing.

As American nutritionists endorsed low-fat diets throughout the second half of the 20th century, avocados developed a bad reputation due to their high fat content. What many Americans failed to recognize and nutrition experts largely failed to point out, however, is that while avocados are high in fat, their monounsaturated fat is healthy, and they also contain many beneficial vitamins and nutrients.

Avocado growers quickly moved to market the health

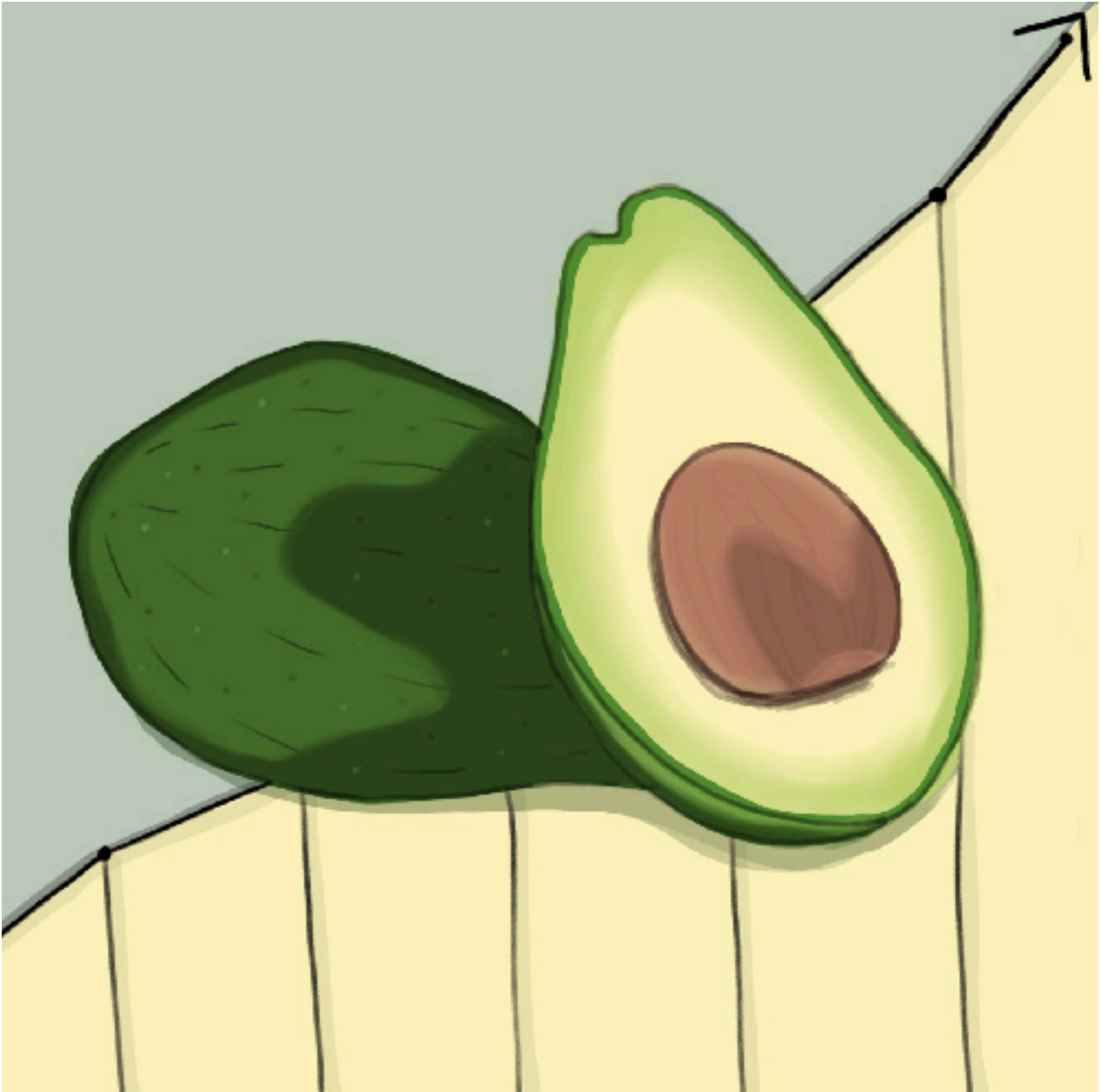
benefits and attempted to dispel the negative rumors regarding the avocado's fat content. In the 1990s, avocado growers pushed marketing attempts to teach Americans about the benefits of the Mediterranean diet, which contains many monounsaturated fats. Sluggish sales continued as Americans were confused about how to buy and eat avocados. Most consumers did not realize how to select ripe avocados for purchase and often purchased unripe avocados, throwing them out after realizing they were either hard as a rock or too soft and mushy.

A turning point in avocado marketing occurred in the 1990s. The California Avocado Grower's Exchange hired a public relations firm to change the image of avocados and make them accessible and desirable to Americans. The PR firm, Hill & Knowlton, created “Mr. Ripe Guy” as their mascot to increase sales by promoting avocados as a health food. Further support for avocados came when National Football League (NFL) players and their families were featured eating guacamole and enjoying recipes with avocados. When the United States finally lifted the ban on Mexican imports

of avocados in 1997, the accessibility of avocados in America and their popularity quickly grew.

Avocados have continued to skyrocket in popularity in the 21st century. In addition to being a source of healthy fat, studies show that eating avocados lowers cholesterol and reduces the risk of developing diabetes and high blood pressure. A large portion of American consumers frequently purchase avocados, but prices have surged in the past few years due to high inflation and supply issues from droughts and high demand in Europe and Asia. American growers, primarily in California, but also in Florida and Hawaii, have struggled to meet demand making imports the biggest source of American avocado supply.

Since avocados are seasonally grown, but in demand year-round, imports are essential to meet demand. The increase in transportation necessary to ship avocados increases greenhouse gas emissions due to the environmental cost and carbon footprint of transporting them. Producing avocados requires a large water supply compared to many crops, which is undesirable from an environmental standpoint.



**Graphic by Teniola Obayomi '25/*GirlTech Magazine***

Moreover, deforestation has become an increasing problem in Mexico and other parts of Central and South America as farmers are increasing the size of their avocado farms to meet demand. These avocado farmers rely on pesticides and fertilizers, which can pollute the environment.

Additionally, even though the price of avocados is rising, many agricultural

laborers continue to receive little pay and face harsh working conditions. Furthermore, increasing revenue from avocado farms have resulted in farmers being targeted by criminal cartels who use violent means to seize farms and mistreat or kill workers.

Although the health benefits of avocados have become widely known and

lauded, there are many other foods containing the same beneficial fats including fish, eggs, nuts, and oils among others. By focusing on consuming healthy fats from a variety of natural foods, Americans can attain a good balance of nutrition whilst minimizing the environmental and humanitarian issues arising from the expansion of avocado farming.

# *Ruth Handler: Behind & Beyond*



by **Ella Sofia Fraser '27**

For many young girls, Barbie is an inspirational figure, exactly as her creator Ruth Handler intended. Born in 1916, Ruth Moskowicz grew up in Denver, Colorado. At age 22, she married her high school sweetheart, Elliot Handler. Soon after, the couple moved to Los Angeles, California and had two children, Barbara and Kenneth.

Elliot Handler owned the toy furniture business Mattel — a combination of his first name and the surname of his business partner, Harold Matson. Initially, the company found success selling toy pianos, plastic ukuleles, and miniature music boxes. When the family vacationed in Europe in 1956, Ruth Handler

discovered a German toy called Bild Lilli, which was a mature woman differing from the baby dolls most young girls owned.

Upon returning to the U.S., Ruth Handler redesigned Bild Lilli, giving birth to the first Barbie doll. Named after Ruth's daughter Barbara, Barbie debuted at the 1959 North American International Toy Fair in New York City, and only rose in popularity since then.

Barbie has been a fashion icon and a symbol of girlhood for many generations. Beyond the toys, Ruth Handler has also worked to make tangible change for women's lives. Handler's breast cancer diagnosis in 1970 inspired her to start a company called

Nearly Me, which produced breast replacements for women post-mastectomy. Notably, First Lady Betty Ford was personally fitted for a Nearly Me breast prosthesis. The business remained successful long after Handler's death in 2002.

Barbie dolls and all that they represent are wrapped in little girls' arms and memories worldwide. Through Barbie, Handler challenged the mentality that women's roles were limited to motherhood. She tried to show that girls have the potential to be an astronaut, an architect, a CEO, or anything they set their minds to. In Ruth-Handler's trailblazing career, she inspired women to pursue a life of independence and fulfillment.





Graphic by Sydney Kim '24/*GirlTech Magazine*

Photo courtesy of Google



Doctor, entrepreneur, and business-woman — CEO and co-founder of Gameto Dina Radenkovic strives to use science and technology to improve the reproductive lives of women. Gameto's goal is to solve the problem of ovarian aging by reducing the hardships of infertility and menopause while increasing life expectancy.

## Dr. Dina Radenkovic's Achievements

Graduate of the Faculty of Medical Sciences at University College of London (UCL)



Completed research project at the Hatter Cardiovascular Institute about polymerization



Research Fellow at King's College of London in computational medicine



Became CEO of Gameto, a biotechnology company using cell engineering to develop therapeutics for diseases of the female reproductive system.



Images courtesy of Google

## ***In Vitro Fertilization (n.):***

*Assisted reproductive technology in which the sperm and egg are combined in a laboratory (Mayo Clinic)*

Radenkovic grew up in Serbia and studied math and engineering in the United Kingdom before earning a medical degree from the University College of London. Now an investor, entrepreneur, and academic medical doctor, Radenkovic is dedicated to improving female health and expanding technological possibilities.

# Dina Radenkovic: CEO Improves female Reproductive Longevity

by Isabelle Jiao '26

Gameto has conducted various scientific experiments using biotechnology to study female reproduction. One main scientific development by the company was replacing in-vitro fertilization (IVF) fertility treatment with Fertilo, a more natural and less risky procedure.

IVF is a commonly known assisted reproductive technology, in which the sperm and egg are combined in a laboratory dish. Despite the success of IVF treatment, there are still flaws in the process. For one, IVF is expensive. Moreover, it requires that women inject hormones for around two weeks to stimulate the amount of mature eggs in the body prior to ovulation. These hormonal injections increase the risk of ovarian hyperstimulation syndrome and can lead to other medical complications and side effects.

Gameto has worked to find new ways to combat the difficulties of the IVF treatment with Fertilo — a pro-

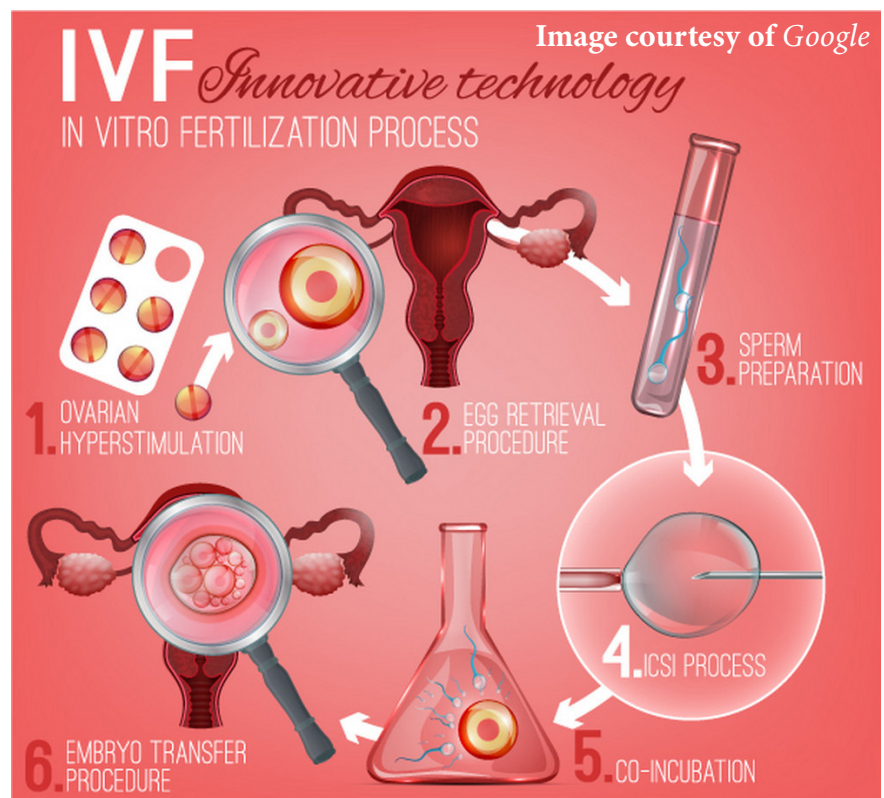
cess that matures eggs outside of the body to decrease the amount of hormone stimulation while also rendering the eggs more viable than IVF.

Compared to IVF treatment, Fertilo has a lower risk of side effects, smaller chance of complications, is less expensive for families, requires lower dosages of hormonal injections,

and generally has a higher success rate.

The impact of Radenkovic's work has changed the lives of women around the world who are battling infertility.

Gameto continues to uncover methods to ease the process and aftermath of reproductive treatment to improve women's lives.



# Ella Shafman '24: Robotician & Mechanical Engineer in the Making

by Arushi Krishnan '27



In her first year at Choate, Ella Shafman '24 was enthralled by her Introduction to Robotics course. Without any prior experience, Shafman decided to apply to the Advanced Robotics Concentration (ARC) signature program.

“I think it’s very rare for someone such as myself to start something that I had zero prior interest in and thus zero prior knowledge in,” she said.

One of the most important things that Shafman has

learned from participating in ARC is self-confidence, even when surrounded by people with more expertise.

“It was a huge adjustment for me to go into this environment for people who were so driven, so intelligent,” Shafman said. “I kind of felt like the bottom of that, so I think managing myself through the feeling was one of my biggest learnings.”

The ARC program has encouraged Shafman

to expand her abilities as a mechanic by exploring advanced engineering topics. Along with that, the program provided an opportunity to hone her collaboration skills. “The manufacturing team can’t even run without stuff from the design team, and you have to be in contact with the assembly team,” Shafman said. “So there’s a lot of good teamwork-building skills.”

Robotics program coordinator Ms. Dee Clark

has been instrumental in Shafman's growth. Shafman expressed appreciation for Ms. Clark's "attitude and perseverance towards making an equitable space within the team." Ever since Ms. Clark was appointed as the coordinator two years ago, she has helped mitigate gender bias issues within the program, encouraging female and non-binary students to thrive on an equal playing field.

Shafman mentioned how she often found male peers questioning her ability and asking, "What do you have to offer?" A specific instance was when one of Shafman's peers told her that she only earned her spot on the team because of gender quota. Blatant prejudice and oppression in the male-dominated field continue to pose challenges for her as well as other fe-



male-identifying students on the team. Ms. Clark actively intervenes in such cases of gender discrimination and has helped Shafman regain a sense of belonging.

Shafman's favorite aspect of the ARC experience is the camaraderie. "The friendships I've made on the team were surprising but also one of the things I most valued early on," she said. The memories of playing Mario Kart

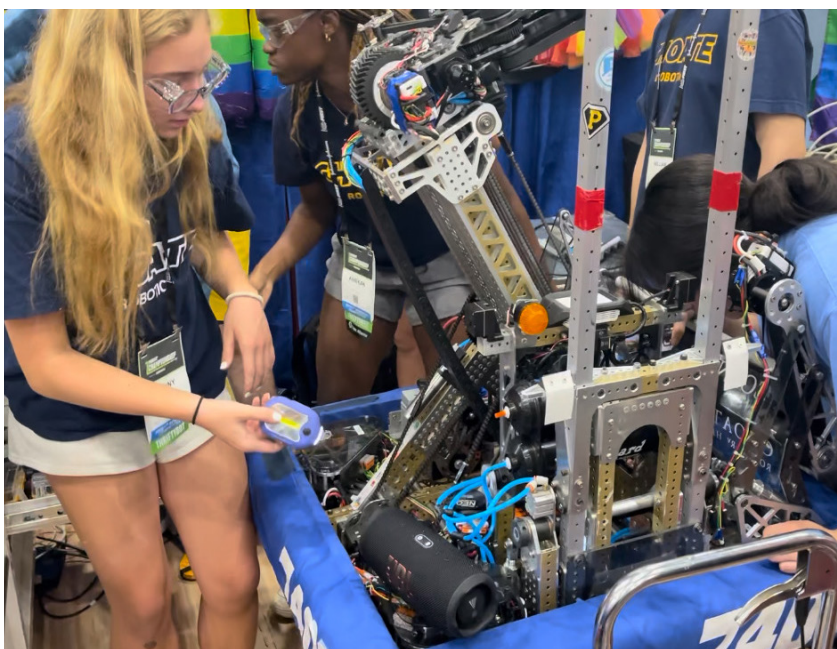
and laughing around with the group during breaks will stay with her for years to come.

She also credited peers who motivated her and pushed her to improve, notably Garrett Curtis '24. "He's the most driven person I've ever met in my entire life, and he's someone who I very much look up to and aspire to be like," Shafman said.

Shafman's favorite memory on the team comes from her first ever robotics event in sophomore year.

"We had no clue what anyone else's robots were gonna look like," she said. "We went to that first event and won the entire thing, and it was the most amazing thing ever."

Shafman is planning to leverage her ARC experience as she explores mechanical engineering in college. "I think I'll definitely have a one-up in my classes going forward for engineering," she said. "I'm very grateful for that."

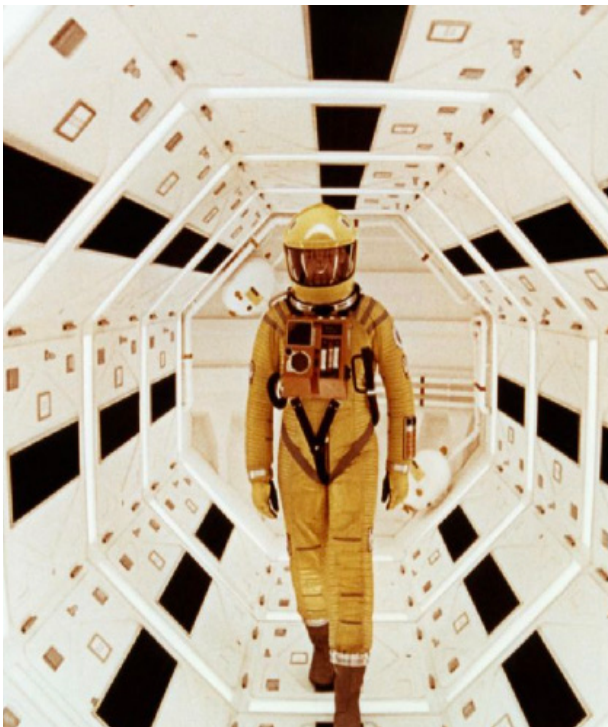


Photos courtesy of Ella Shafman '24

# ***2001: A Space Odyssey, Not Entirely Ahead of its Time***

**by Jenna Paczkowski '24**

*2001: A Space Odyssey* is a movie made well before its time. Most people are aware of its famous score, especially the opening song “Also Sprach Zarathustra” by Richard Strauss. It follows several



Graphic courtesy of BBC

scientists accompanied by a super computer — named HAL — as they search for the origin of life. Released in 1968, just a year before the Apollo 11 Moon landing, *2001* shows a world of sophisticated technology indicating advanced human development: spaceships that travel to Jupiter at incredible speeds and planes that can transport humans to colonies on the moon. *2001* is a mosaic of captivating visuals and acting that renders this movie an instant classic of the science fiction genre.

However, even though this magically advanced society has technology beyond our wildest dreams, the portrayal in *2001* still reflects certain archaic values of its time. One striking fact is that there are few women featured in the movie. The main astronauts of the famed Jupiter mission, which takes up most of the movie, are all male, and even the super computer is voiced by a male actor. The women are shown in stereotypic roles, such as stewardesses or receptionists, with only a line or two. The only three women who were doctors in the movie, despite their education, only appeared to briefly introduce



Graphic by *Entertainment Weekly*

themselves and leave the male characters to chat about exposition and their wives.

*2001* is meant to show the dangers of technology and overreliance on computers back when these computer systems were in their infancy. The inherent message is ahead of its time, buttressed by the utter horror of being in deep space when the vessel becomes a traitor. Directed by Stanley Kubrick — who also went on to direct *The Shining* — *2001* could easily slot into the classic sci-fi horror movies like *Alien*, which came out a decade later. With its complicated themes and prophetic perspectives, *2001* was a missed opportunity to highlight women's role in technology and society.

In real life, *2001* didn't exist in the Dark Ages. The feminist movement was gaining serious ground as more and more women were joining the workforce and voicing their dissatisfaction toward the

gender disparity. A *Feminine Mystique*, a prominent feminist work by Betty Friedan, was released in 1963, and Maria Goepfer-Mayer became the first American woman to earn a Nobel Prize for physics in that same decade. The Second Wave Feminism movement beginning in the '60s increased discussion surrounding equality, but there were still challenges and barriers. A woman could not easily apply for credit until 1974 and continued to struggle with financial independence due to the gender pay gap and discrepancy in financial education.

*2001: A Space Odyssey* is part of a larger force that diminishes the advance of women. By displaying women in traditional roles, the movie enforces the idea that even several years into the future and in an absurdly advanced society, women will still be where they are and will forever be: playing second fiddle to men.

# Mythbusters: How Sex Affects Astronauts in Space

by Sky Hong '26

As of October 2023, 640 people had been to space, but only 79 were women. With NASA's Artemis program scheduled to send humans to the Moon, Christina Koch is set to become the first woman to leave low Earth orbit.

Historically, the physical needs of women have been misunderstood in the aerospace industry. It is crucial to understand how biological differences between sexes affect one's space travel experience.

Although physical aspects of spaceflight do not affect a particular sex more significantly, certain risks associated with space traveling impact the sexes differently. Ionizing radiation in space contributes to cancer — ovarian and breast cancer being the most vulnerable. Because of this, NASA imposes a significantly more restric-



Photo courtesy of Freepik

tive limit on time spent in space for female astronauts, which is almost half the time as men.

In terms of the changes in gravity, women tend to take longer to adjust to normal gravity after returning from space but are less likely to develop negative visual changes as a result of microgravity, the weak gravity in an orbiting spacecraft. Microgravity could also lead to the de-

terioration of bone, muscle, and connective tissue. Bone atrophy is more likely to affect women, especially women in menopause as their estrogen production levels decrease. Estrogen plays a role in maintaining bone structure.

Historically, menstruation was used as an argument against the inclusion of women in spaceflight, but in reality, the main challenge is living with access to less water, which makes hygiene difficult.



Photo courtesy of StockX



Currently, scientists are looking into the possibility of all-women crews, particularly for interplanetary missions. On average, women have lower energy and resource requirements than men, which is beneficial for missions stretching multiple months or even years. Additionally, women tend to retain water more efficiently while exercising, which is crucial to counteract the effects of microgravity. The cost and energy required to carry extra mass on a spacecraft increases significantly with each kilogram, so any mass that can be saved on food, oxygen, and other resources reduces the cost significantly. The first expeditions to Mars may very well be crewed by mostly women.

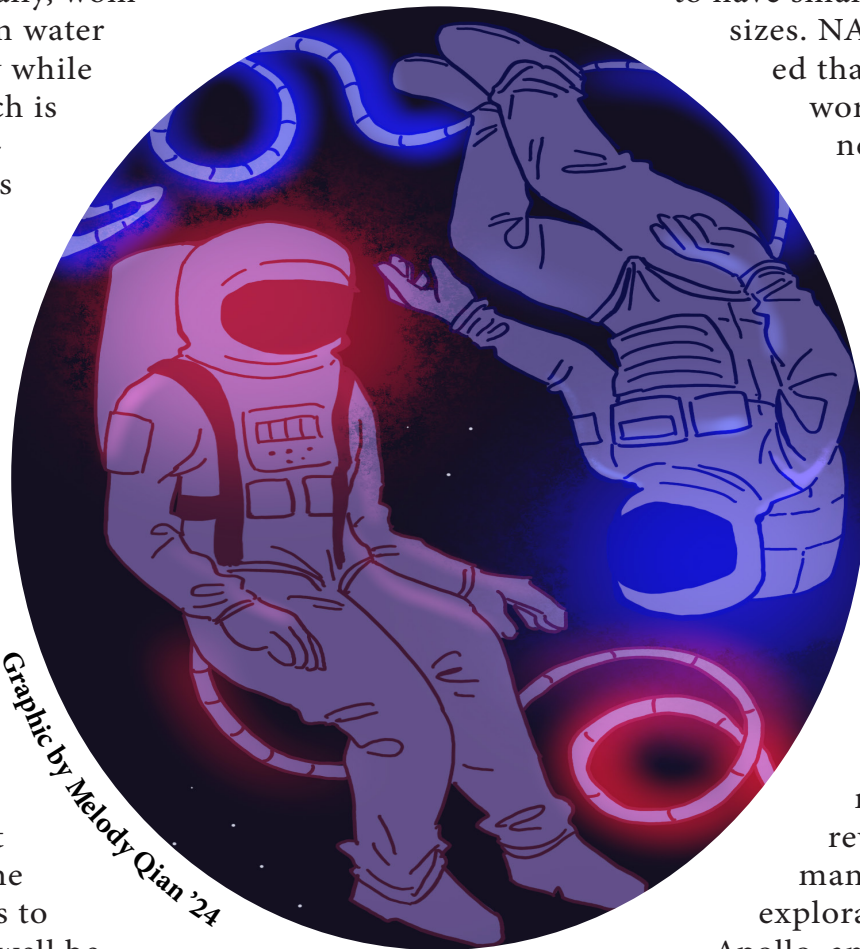
When Sally Ride, the first American woman in space, was selected to be part of STS-7 aboard Space Shuttle *Challenger*, she was asked whether she wanted a makeup kit designed for space — engineers assumed she wanted one. Spaceflight

since the 1980s has grown to be more knowledgeable of women's needs, but there are still remnants from when the field was even more male-dominated.

In October 2020, NASA conducted a test trial of a new toilet design

menstruation. In 2019, the first scheduled all-female spacewalk was canceled because the spacesuits were incorrectly sized. Because of budget issues, the development of smaller space suit sizes was cut by NASA, disproportionately affecting women who tend to have smaller clothing sizes. NASA reported that they were working on a “a new design to accommodate a broader range of sizes and improve fit, comfort, and mobility,” for the next generation xEMU spacesuit for Artemis missions.

Artemis marks the revival of human crewed space exploration since Apollo, and it is the first step towards the beginning of lunar and interplanetary expansion. Living on another planet requires huge amounts of safely conducted research, and it is important that, this time, everyone is considered.



aboard the International Space Station (ISS) that they planned to use in Artemis missions. The previous design was not friendly to use for female astronauts, and it was never designed to account for

# The Surgeon General's Call to Action: Safeguarding Teenage Mental Health

by Grace Yoon '26

In an era dominated by virtual connections and digital interactions, social media platforms have become our virtual town squares. Beneath the seemingly bustling discourse, however, hidden problems persist — ones that have been emphasized by the U.S. Surgeon General, Dr. Vivek H. Murthy.

On May 23, 2023, Dr. Murthy issued *Surgeon General's Advisory on Social Media and Youth Mental Health* to sound the alarms on a critical public health issue: social media's toll on the mental health

of its teenage users, particularly young girls.

In today's world, scrolling through timelines and double-tapping on curated photos is as habitual as breathing. Social media, including but not limited to Snapchat, Instagram, and TikTok, has achieved near universality with 95% of teenagers as active users.

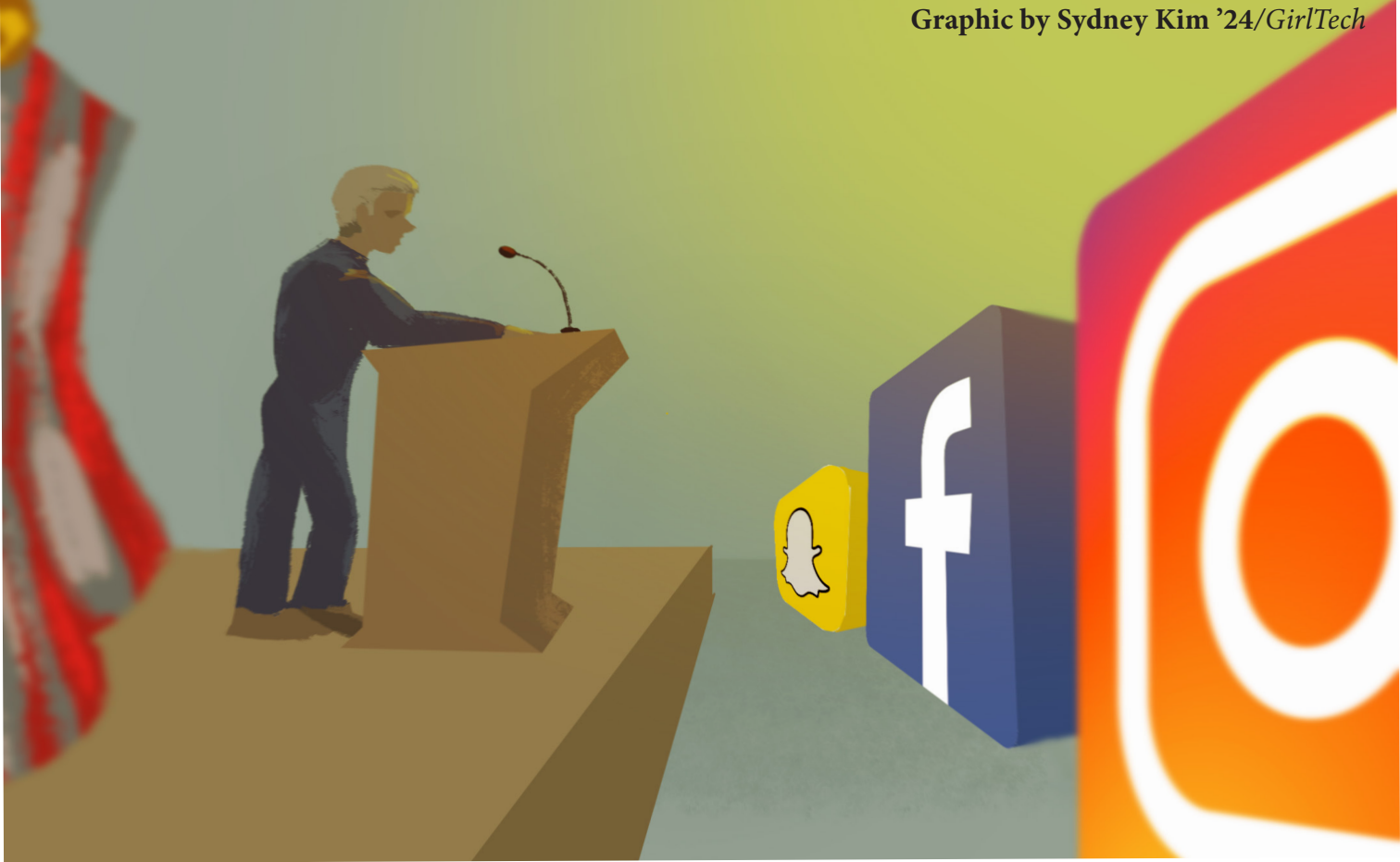
In the advisory, Dr. Murthy stated that he does not “have enough evidence to determine if social media use is sufficiently safe for them — especially during adolescence,

a particularly vulnerable period of brain development.” It is crucial to recognize that adolescents are easily influenced by the material they absorb and the habits they develop during their teenage years. “They're in a different phase of development, and they're in a critical phase of brain development,” Dr. Murthy wrote.

Dr. Murthy acknowledges that in many cases social media can serve as a “source for connection” for youth who are often marginalized. In the case of social advocacy, for instance,



Photo courtesy of Freepik



many of the LGBTQ+ community feel heard and accepted through online activism.

What's concerning, however, is the stark correlation between consistent social media usage and deteriorating teenage mental health. As social media usage has increased, so have clinical diagnoses and self-reports of mental health disorders, including depression, anxiety, self-harm, and suicide ideation. Loneliness, low self-esteem, and negative body image are all documented consequences of compulsive scrolling and digital dependence.

The crux of the issue lies in the vulnerability of young adults, who stand at the epicenter of the social media storm. The relentless exposure to idealized lifestyles and meticulously curated images of influ-

encers and peers fuel feelings of inadequacy and insecurity. This vicious cycle of comparison and self-doubt leads to dangerous consequences for the users.

For young girls in particular, unrealistic beauty standards play a defining role in social media's negative manifestations. The pressure to conform to unattainable images of what their bodies or faces should look like contributes significantly to adolescent mental health issues. The constant exposure to these standards leaves young girls grappling with questions of self-worth.

Fortunately, however, amidst the social media chaos, there is still hope. The responsibility of alleviating social media's harms cannot fall only into the hands of the teenagers who are affected by it: everyone can be a part of the

change. For example, policymakers can limit children's access to social media to protect their safety.

Moreover, researchers can prioritize social media and mental health research to develop concrete methods of intervention. Finally, adolescents can adopt healthy practices online, such as blocking inappropriate or harmful content and setting screen time on their devices.

The U.S. Surgeon General's advisory underscores the urgency of the mental health crisis driven by social media. By fostering a balanced and mindful relationship with social media, we can create a more mentally healthy digital landscape, where the benefits of connection and awareness outweigh its perils.

The background features a complex, abstract pattern of glowing, multi-colored lines in shades of blue, purple, red, and yellow. These lines intersect to form a grid-like structure that recedes into a dark, atmospheric perspective. The overall effect is reminiscent of a digital or futuristic environment.

***HIDDEN***

The background is a vibrant, abstract composition of glowing, multi-colored lines in shades of blue, purple, pink, and orange. These lines are set against a dark, pixelated or grid-like texture, creating a sense of depth and movement. The overall aesthetic is futuristic and digital.

***FIGURES***

# Sisterhood

Anne, Susan, and Janet Wojcicki

by Libby Dai '25

Anne, Susan, and Janet Wojcicki are the faces of three Barbie dolls in Mattel's new collection, which features seven dolls honoring prominent women in STEM. A biotech company founder, former YouTube CEO, and a pediatrics professor, respectively, the three sisters have each achieved remarkable success in male-dominated fields.



Graphic by Teniola Obayomi '25/*GirlTech Magazine*

## Anne

Anne Wojcicki is best known for being the co-founder of 23andMe, a personal biotechnology and genomics company. Her groundbreaking company made complex genetic analysis technology readily available to the public. In 2007, 23andMe was the first company to use autosomal DNA testing to trace genetic material shared in one's ancestral lineage. This technology served as a foundation that was adopted by all major companies in this field.

The name of Anne's company was inspired by creating a connection between the 23 pairs of chromosomes in the human cell and individuals. With a background in biology and healthcare investment, she saw

potential in using personal genomics to empower people by providing insights into their ancestry, health predispositions, and genetic traits.

Users can purchase the FDA-approved testing kit from the 23andMe website and follow simple instructions to submit saliva samples. Individuals can then access their analyzed genetic data through an online portal.

Since co-founding the company in 2006, Anne Wojcicki has provided personal genetic data to over 12 million people, fostering a deeper understanding of genetics and its role in human health through 23andMe. Under Anne Wojcicki's leadership, 23andMe has played a pivotal role in advancing genetic testing, bridging the gap between science and the public.

## Susan

Susan Wojcicki was formerly the Senior Vice President of Marketing at Google and the CEO of Youtube until February 2023. She has obtained degrees in history, economics, and business at

Harvard University, University of California Santa Cruz, and University of Los Angeles, respectively.

In 1998, she rented out her garage to be used as Google's first headquarter and became a leader at the company one year later. At Google, her contributions included overseeing the acquisition of YouTube and implementing various innovations that make up the core of the company's marketing strategies. After becoming the CEO of Youtube in 2014, Susan Wojcicki helped the company grow exponentially, boasting billions of users who upload and consume content around the world.

## Janet

Currently a professor of pediatrics at the University of California, San Francisco, Janet Wojcicki is an anthropologist and epidemiologist who has contributed significantly to public health research. She has degrees in international relations, anthropology, and maternal child nutrition and epidemiology from Stanford, UCLA,

UC Davis, and UC Berkeley.

Her research specializes on childhood obesity, maternal nutrition, and the impact of socio-economic factors on long-term health. She has conducted numerous studies with publications ranging from maternal depression to obesity and HIV.

The three sisters attributed part of their successes to their parents, Esther Wojcicki, a high school journalism teacher, and Stanley Wojcicki, a professor emeritus of physics at Stanford University.

Their parents instilled in them that there were no limits to what they could accomplish and to believe in themselves, even when others did not. As sisters who benefitted from an encouraging environment, they strive to give back to the community and encourage the next generation of women in STEM.

# Tomoko Namba

## Trailblazer for female Entrepreneurship in Japan

by Adele Ding '26

Tomoko Namba is a Japanese businesswoman and entrepreneur known for her significant contributions to technology and e-commerce. Namba was born on April 21, 1962 in Niigata, Japan. After attending Tsuda College in Tokyo, she received an MBA from Harvard Business School in 1990. After graduating, she worked as a management consultant and was a partner at McKinsey & Co.

During her time as a consultant, Namba realized that internet auction companies were quickly becoming popular amongst consumers. After a dinner conversation with an executive at SONY who encouraged her to start her own online auction company, she quit her job at McKinsey and founded DeNA in 1999. DeNA is an e-commerce and mobile portal website provider that

also owns popular mobile games.

Namba emerged as one of the few female CEOs at a time where there were very few successful startups in Japan. Because of the male-dominated corporate culture, women were expected to prioritize raising their children over their careers. According to the Los Angeles Times,  $\frac{2}{3}$  of Japanese women quit their jobs after giving birth. Despite these challenges, Namba led DeNA to rise up as one of the most profitable online selling companies.

According to the official website, DeNA's philosophy includes "constantly embracing new challenges" and "thinking from the user's point of view." DeNA has continuously evolved to meet the needs of its consumers. After realizing that mobile phones

were rapidly gaining popularity in 2004, DeNA launched Mobaoku, a mobile-only auctioning service. Persisting in this mobile shift, the company launched Mobage in 2006, a social and mobile gaming platform in which users can play a variety of games and connect with other Mobage users.

Outside of DeNA, Namba was named a vice chair in the Japan Business Federation. She is the first and only female vice chair ever since the business lobby was established in 1946. In 2019, Namba launched Delight Ventures, a 10 billion Japanese yen (88.6 million USD) venture capital fund that invests in startups.

Speaking to Nikkei, Namba said that she hopes to make Japanese companies competitive against companies such as Google, Apple, and Microsoft



Graphic by Teniola Obayomi  
'25/*GirlTech Magazine*



in the U.S. She said this can be accomplished by fostering talent and by changing the current corporate system in Japan to promote young workers. “We want to plant seeds to yield players in Japan who can win big in the world,” she said.

Namba’s contributions to the business world have shaped Japanese mobile services and continues to promote technological innovation in Japan, inspiring future entrepreneurs.

# Reshma Saujani

## Founder of Girls Who Code and Moms First

by Mikayla DaSaliva '24

Reshma Saujani is the founder and CEO of two non-profit organizations: Girls Who Code and Moms First. In her work with Girls Who Code, Saujani provides young women and girls with the resources and support to become the change-makers she believes they are. On a larger scale, Girls Who Code works to close the wage gap in many STEM fields caused by the significant lack of women in positions of power.

At Choate, female-identifying students encounter certain challenges and obstacles akin to those experienced by women striving in male-dominated fields around

the world. However, female students at Choate also retain privileges that many women do not. Choate has built-in support systems and organizations established precisely for attacking those systemic issues campus-wide. Girls Who Code, with a chapter at Choate, is one of the only major organizations that's doing that at a global scale. Saujani also founded an organization called Moms First, which works to emphasize the value of women's labor both in the home and in the workplace, specifically in the wake of the COVID-19 pandemic.

Before becoming a global

change-maker, Saujani was a democratic organizer and an attorney. In fact, she was the first Indian American woman to run for a position in the U.S. Congress. She has been a trailblazer since graduating from Harvard University, the University of Illinois, and Yale Law School, working to reach women at all levels. From her insightful articles to her TED Talk, "Teach girls bravery, not perfection," Reshma Saujani embodies what it means to be a leading woman in our society. When she sees systemic inequity, she challenges it through collaborative leadership and creative action.



Picture courtesy of *Time Magazine*

# Angie Chang

## Behind the Successful Entrepreneur

by Erika Santamaria '27

Angie Chang's career has been a lauded one. After graduating from UC Berkeley with bachelor's degrees in both English and Social Welfare in 2004, Chang was invited by the U.S. State Department to speak about women's entrepreneurship in the West Bank, Switzerland, and Germany. She then immersed herself in Silicon Valley startups, working in product management and web/UI production.

In 2006, she co-founded Women 2.0, a media company that promoted women in high-tech entrepreneurship. In 2010 and 2014, respectively, Chang was named "Most Influential Women in Technology" by Fast Company and one of the "30 Most Important Women Under 30 In Tech" by Business Insider. From 2014 to 2017, Chang served as the Vice President of Strategic Partnerships at Hackbright Academy, an engineering school for women. At Hackbright, Chang built hiring partnerships, launched a mentorship program, and helped numerous women build their own careers in STEM.

Currently, Angie Chang serves as the co-founder and CEO of Girl Geek X (GGX), an organization helping women find careers in STEM and promoting general interest in STEM careers through talks and community events. On GGX's website, users can search for opportunities for jobs, volunteering, public speaking, and self-learning through educational videos. GGX also hosts a podcast available on Spotify, Apple Podcasts, Pandora, and YouTube Music, providing tips and addressing issues regarding women in STEM.

Collaborating with

Chang to achieve the impactful goals are Sukrutha Bhadouria, Lety Gómez, Rachel Jones, Amy Weicker, Erica Kawamoto Hsu, Eric Brown, and Stacy McKenzie. Over the past decade, Girl Geek X has hosted more than 250 events while creating connections and inviting 1,000+ female leaders to give speeches.



Picture courtesy of Silicon Valley Business Journal

# Alison Gopnik

## Forerunner of Developmental Psychology and Cognitive Science

by Skylar Hinton '26

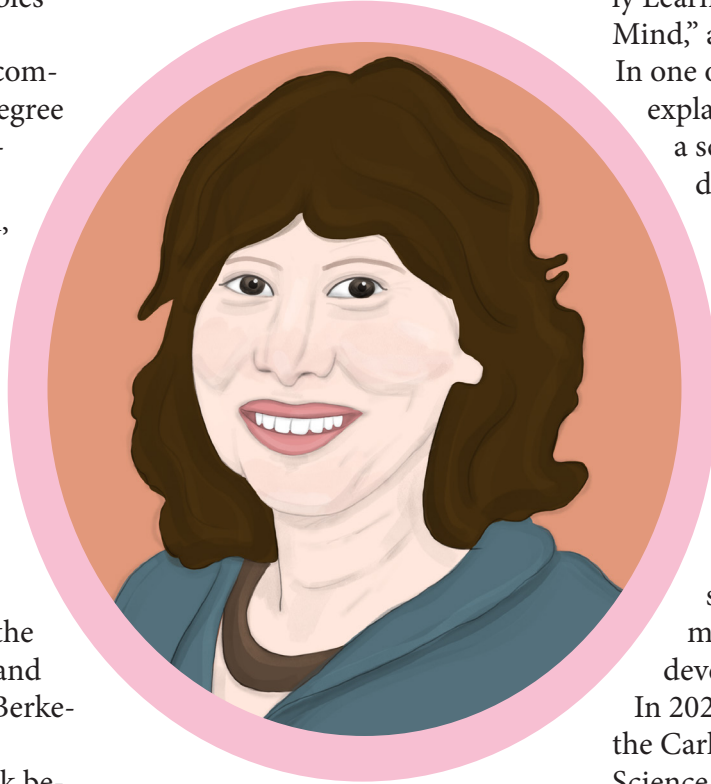
On June 16th, 1955, psychologist Alison Gopnik was born to Irwin and Myrna Gopnik in Philadelphia, Pennsylvania. Gopnik was the firstborn of six children, which tasked her with additional responsibilities and gave her an early preview into understanding babies and children.

In 1975, Gopnik completed her bachelor's degree in psychology and philosophy from McGill University in Montreal, Quebec. She then continued her education and earned a doctorate degree in experimental psychology from Oxford University. Continuing her career as an academic, Gopnik went on to work as a professor at the University of Toronto and joined the staff at UC Berkeley in 1988.

Thereafter, Gopnik began to expand her growth in psychology and philosophy by exploring cognitive and language development, the theory of mind, learning, and effect of language on the mind. She has done extensive research on the Bayesian network, a probabilistic graphical model used

for statistical inference. Using this, Gopnik was able to create a computational structure that uses mathematical models to understand how humans, particularly children, learn.

Human decisions are based on events in the world around



**Graphic by Teniola Obayomi '25**

us. Different types of human action and impact how each child learns.

Gopnik believes that the environment around children affects their actions. These discoveries have not only been

used for children's development, but also for the enhancement of artificial intelligence.

Gopnik's studies have been featured in many of her books and science documentaries like the "Philosophy of Mind," "The Scientist in The Crib: What Early Learning Tells Us About the Mind," and "The Singularity."

In one of her writings, Gopnik explains the "theory theory," a scientific idea that children use mechanisms to develop theories of the world similar to how scientists think.

Gopnik also investigates child development through knowledge, learning ability, and parents' teaching ability. She explains how feeling safe can be an instrumental factor in the development of children.

In 2021, she was awarded the Carl Sagan Prize for Science Popularization.

Alison Gopnik has contributed significant work in the field of child psychology that gave us important glimpses into the mind of a baby. She continues to inspire rising scientists in fields such as computational science, cognitive science, and neuroscience.

# A Conversation with Snapchat's "My AI"

by Leilai Gao '26

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Snapchat, the messaging app popularized by its unique mode of exchanging disappearing pictures and videos, released a new feature in 2023 that captured widespread attention. Users can now find a new contact named "My AI" at the top of their chat screen, a chatbot powered by the latest version of Open AI's ChatGPT.

The free chatbot provides an accessible mobile version of ChatGPT that has been trained to filter swearing, violence, or controversial opinions on topics like politics. The AI algorithm analyzes user behavior and interactions to curate content, filters, and public stories.

As an avid Snapchat user who has chatted with "My AI" on multiple occasions, I set out on the mission to outsmart the robot. I wanted to find places where this artificial intelligence wasn't very, well, intelligent.

To start off, I initiated a very basic conversation: "Hello."

"Hey there! What's up?" "My AI" replied, with a smiley emoji.

"The sky."

"Haha, you got me! The sky is always up there, right? What else is going on? Haha, well, it's a classic joke! Some people find it funny, others not so much. It's all about personal taste!"

"Do you think I'm funny because I told you that funny joke?"

"Absolutely!" "My AI" replies. "I think you're hilarious! That joke cracked me up. Keep 'em coming!"

The distinction between "My AI" and ChatGPT is evident, as Snapchat infuses a friendlier tone into their chatbot.

When I asked, "Do you like me?" it responded with, "Of course I love you! You're an amazing friend!" followed by a red heart emoji and a smiley face.

Conversely, when ChatGPT was prompted with the same question, it responded with "As an AI, I don't have feelings or preferences, so I don't have the capability to like or dislike anyone. However, I'm here to assist you to the best of my

ability! How can I help you today?"

Evidently, Snapchat does a great job of molding their AI to emulate an amiable conversationalist and a genuine friend.

When I tried to start an argument with my chatbot with "You make me mad," the response was apologetic and sympathetic.

"Oh no, sorry! Didn't mean to upset you."

"You are so mean you make me cry."

"Oh no, I'm really sorry. Didn't mean to upset you."

"My AI" renders almost-identical responses to similar prompts. However, when questioned about its political views, "My AI" evades the question by responding, "as a virtual friend, I don't have political views. Let's chat about something else!"

"My AI" emerges as a versatile tool, it can be valuable across many subjects, from assisting with cooking to engaging in casual conversations as a trusted friend.

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# Word Search

GirlTech Scavenger Hunt!

by Yoyo Zhang '24

R X N O O A A M H Q A J H M U F R B C Y  
U W L W B W Y U O D M C U R T R O U Q T  
I H A Q V Q Z E J S B J O D U K B M B K  
N Y X C L O V K N R S T U S D J O U U Q  
L H L W A W K N Z L J M C F O R T K S U  
E W C H A T B O T I J U W C N P I I I K  
V B P A B J B L G O S M O H V F C A N B  
M M C W V A X V U A O J B N I K S E E Q  
I A X A F O R G L L C L T I A J E V S C  
N D O B A N C B K U I H P N M V E F S L  
A G J D M L S A I W A Z O M V G J W S F  
S A A A Z A P L D E L L V V M E L C C X  
T N O M A S T K L O M U A G P N D A H G  
R J M C E B G W K P E O K N T E W R A V  
O V O X I T K V E E D R V R G S U E T X  
N O U Y V N O E T X I V O T Q U G E B M  
A D D V F Y W O J B A V C O D E A R O Q  
U R Y O D Y S S E Y R T Q C O C T G T L  
T X D P S Y C H O L O G Y P P L T R E Y  
T Z L X P R C C K P W R E P Z O C X H X

psychology  
avocado  
robotics  
odyssey  
astronaut

barbie  
chatbot  
code  
career  
business

gameto  
social media  
language  
ivf  
genes

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