

**Mariana uses algorithms to turn knitted textiles into concrete buildings to save money and time while also reducing environmental impact.**



**Mariana Popescu**

Architect  
*she/her/hers*



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**Role:** Researcher at the Block Research Group (BRG) at the Institute of Technology in Architecture at ETH Zurich

**Location:** Zürich, Switzerland

**Family Heritage:** Romanian

**Education:** Ph.D. in Architecture from ETH Zurich, Switzerland and M.S. and B.S. in Architecture from Delft University of Technology in the Netherlands

**Fun Fact:** From 2008 to 2010, Marina was part of the Nuon Solar team which designed, built and raced a solar car across the Australian Outback. She was also part of the ReVolt House team which built a self-sustaining house during 2011 and 2012.

**About the Image:** The background image shows an art exhibit that Mariana designed at Museo Universitario Arte Contemporáneo in Mexico City. She used algorithms to create a 3D knitted tapestry formwork. The formwork was then reinforced with concrete to create a 13-foot tall structure. The colorful traditional dresses of the Mexican state of Jalisco inspired the tapestry.

**Resources:**

- [Mariana Popescu's Bio](#) (BRG)
- [Article: 35 Innovators Under 35](#) (MIT Technology Review)
- [Video: Knitted Concrete](#) (YouTube)
- [Article: Art Exhibit and 3D knitted shells](#) (ETH Zurich)



**Kaz creates interactive geospatial models to help communities and first responders and communities plan how to best respond to wildfires, floods, and other emergencies.**



**Kasra "Kaz" Manavi**

Computer Scientist  
*he/him/his*

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**Role:** Director of Research & Communications at SimTable

**Location:** Santa Fe, New Mexico, USA

**Family Heritage:** Diné (Navajo) and Persian

**Education:** Ph.D. in Computer Science from the University of New Mexico (UNM), M.S. in Computer Science from Texas A&M University, and B.S. in Computer Science & Applied Mathematics from UNM

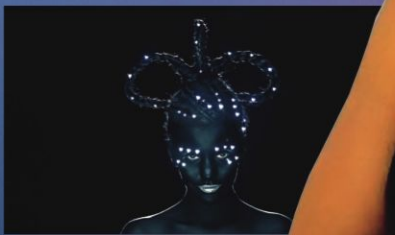
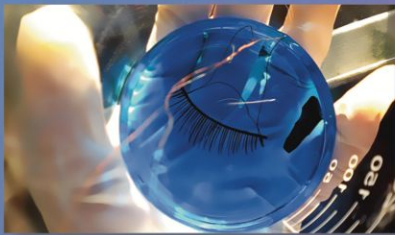
**Fun Fact:** In his free time, Kaz works for the non-profit organization, Navajo Language Renaissance. This organization works with Rosetta Stone to revitalize the Navajo language.

**About the Image:** The colorful background image shows an interactive model projected onto a sand table. First responders and communities use these sand tables to model wildfires and flooding. This lets them plan on how to best respond to these emergencies in their area.

**Resources:**

- [Kasra's Bio](#) (Tapia Lab at UNM)
- [SimTable Company Website](#)
- [Video: SimTable Demonstration](#) (YouTube)
- [Navajo Language Renaissance Website](#)

**Katia creates beauty technology – electronics embedded into cosmetics that can be applied directly to one’s skin, fingernails, and hair – to transform the body’s surface into an interactive platform.**



**Role:** Assistant Professor at UC Davis

**Location:** Davis, California, USA

**Family Heritage:** Peruvian

**Education:** Ph.D. and M.A. in Computer Science from Pontifical Catholic University of Rio de Janeiro, Brazil and B.A. in Computer Science from National University of San Marcos, Peru

**Fun Fact:** Katia’s project, *The Dermal Abyss*, won the Interactive Innovation Award at the South by Southwest Conference in 2018. *The Dermal Abyss* replaced tattoo ink with biosensors that change colors in response to changes in the person’s metabolism.

**About the Images:** The images shown in the background are of one of Katia’s projects. This project involves specially designed false eyelashes. Winking or blinking the eyelashes can animate lights, play music, and display images.

**Resources:**

- [Profile of Katia](#) (UC Davis)
- [Katia’s Website](#)
- [Video: About Katia & her projects](#) (YouTube)
- [Article: The Dermal Abyss](#) (UC Davis)

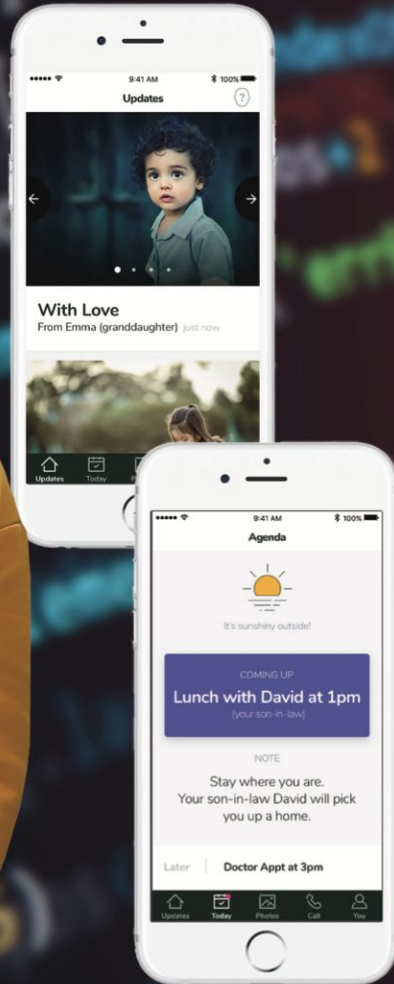
**Katia Vega**

Beauty Tech Designer  
*she/her/hers*

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Emma develops mobile apps that empower patients with Alzheimer's disease to stay connected with their loved ones.



**Emma Yang**

Mobile App Creator  
*she/her/hers*



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**Role:** Founder at Timeless

**Location:** New York, New York, USA

**Family Heritage:** Chinese and Vietnamese

**Education:** 11th grade High School Student

**Fun Fact:** Emma is fluent in English, Cantonese, and Mandarin. She is currently learning Latin, Greek, and French. She aspires to speak as many languages as possible.

**About the Images:** The Timeless app empowers Alzheimer's patients to cope with their illness and stay engaged with friends and family. The screens show the two key features of the app: Updates and Today.

Updates lets patients receive photos that automatically show the names of the people in the photos.

Today is a simple calendar that lets the patient see daily information set up by their caregiver.

**Resources:**

- [Video: Emma's TEDx talk](#) (YouTube)
- [Emma's Bio](#) (Timeless Website)
- [Emma's Personal Website](#)
- [Timeless Website](#)



**Kristy helps develop new medications more efficiently by using artificial intelligence to predict interaction between potential drugs and their targets.**

**Kristy Carpenter**

Computational Biologist  
*she/her/hers*



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**Role:** Researcher and Student at Massachusetts Institute of Technology

**Location:** Cambridge, Massachusetts and Seattle, Washington, USA

**Family Heritage:** Japanese and Alutiiq (Alaska Native)

**Education:** Expected: B.S. in Computer Science & Molecular Biology from Massachusetts Institute of Technology (MIT)

**Fun Fact:** Kristy was first drawn to computer science when she programmed in Scratch as a middle school student.

**About the Image:** The background is a visualization Kristy made of a simulation showing the Ras protein interacting with a cell membrane. The Ras protein is involved in about 30% of human tumors. Blue indicates regions of the protein that contact the membrane the most. White indicates regions that do not contact the membrane as often. Red indicates regions that do not contact the membrane. Learning about how Ras interacts with the membrane helps scientists figure out what kind of drug might be most effective.

**Resources:**

- [Profile of Kristy](#) (MIT News)
- [Kristy's LinkedIn Profile](#)
- [Kristy's Research Gate Profile](#)



**Drew leads multiple teams that merge technology, engineering, art, and math to create immersive art experiences that transport audiences to fantastic realms.**



**Drew "Dr. Woohoo" Trujillo**

Hybrid Artist  
he/him/his



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**Role:** Director of Technology at Meow Wolf

**Location:** Sante Fe, New Mexico, USA

**Family Heritage:** Hispanic

**Education:** Film, Independent Studies, University of New Mexico (UNM)

**Fun Fact:** The first computer program Dr. Woohoo wrote was on a punch card. He had to mail it somewhere so it could be run because computers were huge, expensive, and rare at the time. The program asked the computer to add  $2 + 2$  together and it took 2 weeks to get the answer.

**About the Images:** The background images are all from current or future art exhibits at Meow Wolf. The small image on the left is from the exhibit, the *House of Eternal Return*, in Santa Fe, NM. In this exhibit, common household objects are part of the experience, like the washing machine that you slide through to get to another part of the exhibit. The small image on the right is a sneak peek of *The Navigator* which will be part of the upcoming exhibit in Denver, CO.

**Resources:**

- [Drew Trujillo Bio](#) (Santa Fe Art Institute)
- [Video Bio of Drew Trujillo by Drew](#) (Vimeo)
- [Dr. Woohoo's Website](#)
- [Meow Wolf Company Website](#)
- [Video: CBS Sunday Morning Meow Wolf Profile](#) (YouTube)



**Isaac develops technologies that help farmers increase their productivity, including a sensor that determines how much moisture is in grains to reduce losses during storage.**



**Role:** Founder and Head of Product Development at Sesi Technologies

**Location:** Kumasi, Ghana

**Family Heritage:** Ghanaian

**Education:** B.S. in Electrical and Electronics Engineering from Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

**Fun Fact:** Isaac grew up without electricity or running water. He learned about electronics by taking apart broken radios and abandoned gadgets using a book he borrowed from his school library.

**About the Image:** Pictured are maize (corn) farmers in Tamale, Ghana. They are learning how to measure the moisture content of maize using the GrainMate Grain Moisture Meter.

**Resources:**

- [Article: 35 Innovators Under 35: Issac's Bio](#) (MIT Technology Review)
- [Article: Interview of Issac Sesi](#) (Spore Article)
- [Isaac Sesi personal website](#)
- [Sesi Technologies company website](#)
- [Video: GrainMate video](#) (YouTube)

**Isaac Sesi**

Electrical Engineer  
*he/him/his*

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**Keith builds products and experiences that communicate information through touch, including a wearable device that helps the blind and visually impaired safely navigate their surroundings using vibrations.**



**Keith Kirkland**

Cofounder  
he/him/his



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**Role:** Co-founder and Head of Haptics + Customers Success at WearWorks

**Location:** New York, New York, USA

**Family Heritage:** African-American/Black

**Education:** M.I.D. in Industrial and Product Design from Pratt Institute, B.F.A. in Accessories Design from the Fashion Institute of Technology, B.S. in Mechanical Engineering from Rutgers University

**Fun Fact:** When Keith was six-years-old, he dreamed of becoming a Japanese sword maker. He moved to Japan to study abroad when he was 33 and met one of the greatest sword-makers alive. Keith discovered that it takes eight years to become a licensed sword maker. He then decided that he wanted to do something to help humanity rather than becoming a sword maker.

**About the Images:** The top picture shows Keith's WearWorks cofounder, Kevin Yoo, with blind marathoner, Simon Wheatcroft. The bottom picture shows WearWorks' blind advisor, Marcus Engel, using a Wayband with his dog, Elliot.

**Resources:**

- [Keith's Bio](#) (Civic Hall)
- [Video: Keith's TED Talk](#)
- [Video: Keith explains Wayband](#) (YouTube)
- [WearWorks Company Website](#)



**Rumman led the design of the Fairness Tool that is used to identify and mitigate bias in artificial intelligence (AI) systems.**



**Rumman Chowdhury**

Data and Social Scientist

she/her/hers



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**Role:** Global Lead for Responsible Artificial Intelligence at Accenture

**Location:** San Francisco, California, USA

**Family Heritage:** Bangladeshi

**Education:** Ph.D. in Political Science from the University of California, San Diego, M.S. in Quantitative Methods of the Social Sciences from Columbia University, B.S. in Management Science and Political Science from Massachusetts Institute of Technology

**Fun Facts:** Rumman launched the X Institute where refugees learn data science and marketing skills to find freelance jobs.

**About Her Work:** Rumman has said, “When I think of AI or data science, I literally think of it as information about people meant to understand trends in human behavior.” It can be difficult to understand how AI makes the decisions it does. This is where the Fairness Tool comes in. It can help businesses understand where the data they are collecting may be biased and give suggestions on how to fix that.

**Resources:**

- [About Rumman](#) (from [Rumman’s website](#))
- [Video: BBC TV Interview of Rumman](#) (YouTube)
- [Article: The Data Scientist Putting Ethics into AI](#) (Ozy)
- [Video: Rumman’s TedX Talk](#) (YouTube)
- [California’s Coolest Data Scientist](#) (M.M.LaFleur)
- [Can Artificial Intelligence Play Nice](#) (The Verge)



**Tara empowers girls and families to design technology solutions to important problems in their communities.**



**Role:** Founder and CEO at Technovation (formerly Iridescent)

**Location:** San Carlos, California, USA

**Family Heritage:** Indian

**Education:** M.S. in Aerospace Engineering from Boston University and B.S. in Physics from St. Stephen's College

**Fun Facts:** Tara grew up as the daughter of a doctor in the Army and a mechanic who served in the Indian Air Force. She dreamed of flying or building airplanes and tinkered with engine parts as a child. Tara studied aerospace engineering before founding her nonprofit.

**About the Images:** Tara is the leader of Technovation and an advocate for STEM learning. She works with girls and families who participate in Technovation programs all over the world as shown in the top picture. The bottom picture shows a finalist family at the first Technovation Families AI Challenge Championship Event. This event celebrated six finalist families who identified community problems and solved them using AI.

**Resources:**

- [Tara's Bio](#) (Technovation Team)
- [Video: Technovation \(from Code Girl\)](#) (YouTube)
- [Video: AI For Good 2019: Tara Chklovski](#) (YouTube)
- [Article: CEO Tara Chklovski - Getting Underserved Families Excited About AI](#) (The 74)
- [Code Girl documentary](#)

**Tara Chklovski**

Nonprofit Leader  
*she/her/hers*



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