



## Help Communities Solve Real-World Problems with AI – Become a Technovation Mentor!

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### Abstract

Join other AI professionals as a mentor in Technovation's AI program for families. Share your expertise with adults and children who are curious about artificial intelligence and how it can be used to address real issues in their communities. Help people all around the world learn to not only use AI, but to create solutions with AI that improve their lives and their communities.

### Technovation Families

Technovation, a global technology education nonprofit, is seeking mentors for its second season of Technovation Families, an AI-focused program for families with children ages 8-13. Join peers working in Computer Science fields and be part of the world's largest AI mentoring program. Support families around the world as they learn about AI and develop AI-based prototypes addressing problems they identify in their communities.

Started in 2018, Technovation Families' AI challenge brings families, schools, communities, and mentors together to learn, play, and create with AI. They apply what they learn to solve a real-world problem in their community as part of a global competition. Mentors guide learners of all ages through Neural Networks, data, self-driving car algorithms, and machine learning and training models to recognize images, text, and emotions through an IBM-Watson based platform Machine Learning for Kids. Local educators and CS experts offer encouragement and guidance throughout as families learn about – and use – AI tools for the first time. Mentors especially are a critical touch-point for families who are developing their confidence as problem solvers and inventors, and who have big ideas for applying AI to community problems, but lack technical knowledge, experience, and confidence in their abilities. Mentors are able to volunteer remotely,

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thereby strengthening local capacity in areas that may not have access to technology professionals or universities.

In the first year of Technovation Families' AI competition, 7,500 people across 70 chapters in 13 countries participated, developing 200 AI-based solutions to problems in their communities. These solutions ranged from image-recognition software that scans children's drawings for signs of bullying and a wearable swimming cap for kids to detect early signs of drowning, to a tool to detect and remove invasive algae from a local lake (Figure 1 and Figure 2).



Figure 1: Jeff Dean (Head of Google Brain) listening to a father and son team describing their image-recognition prototype that emits ultrasonic frequencies when it sees a dog.



Figure 2: Six coaches from Bolivia, Palestine, Spain, United States, Pakistan and Kazakhstan who coached their communities to create winning AI-based inventions.

Technovation partners with industry leaders including Google, NVIDIA, Intel, General Motors, and the Patrick J. McGovern Foundation, to bridge the AI knowledge and confidence gap for children and adults around the world (Figure 3).



Figure 3: Mother and sons from Bolivia explaining to a judge how their Raspberry-Pi powered, image recognition system sucks up invasive weeds from Lake Titicaca.

The Technovation Families program is built on a community-based model that involves parents and caregivers so that the adults (in addition to the children) can reignite their curiosity and develop as lifelong learners. After participating in the program, more than 91% of the parents surveyed believed their child developed a sustained interest and growing interest in AI and ~85% of parents wanted to continue investing effort into improving their local communities (Chklovski, Jung, Fofang, & Gonzales, 2019).

Mentors benefit too. Through Technovation’s programs, mentors’ communications and presentation skills improve, as do their professional relationships with colleagues and leaders. And, their work with Technovation participants stretches and grows their creativity, organizational, and project management skills.

Recently, the second season of Technovation Families launched debuting an expanded curriculum developed in partnership with a committee of AI researchers, and industry professionals. The updated curriculum includes additional information about AI, good and bad datasets, machine learning and ethical innovation (Figure 4 and Figure 5). Through 10 fun, hands-on lessons, families learn foundational AI concepts, identify a meaningful prob-

lem to solve in their local community, and build an AI agent to solve it. [Sign-up](#) today to help families make the world a better place with AI!

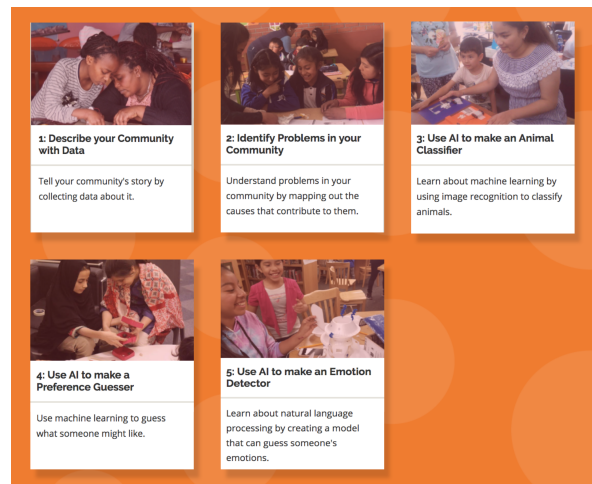


Figure 4: First 5-weeks of project-based Technovation Families AI curriculum that introduces learners to AI, Machine Learning, and building Image and Text Recognition Systems.

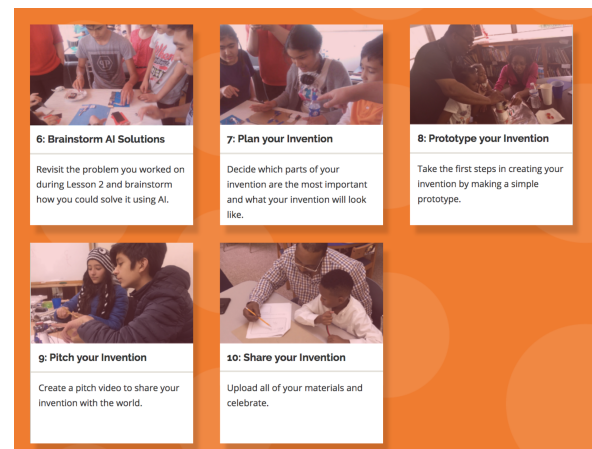


Figure 5: Last 5-weeks of the Technovation Families AI curriculum that helps participants apply their learning to create AI-based prototypes that address problems in their community.

## References

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**Tara Chklovsk** Tara Chklovski is CEO and founder of global tech education nonprofit Technovation. A frequent advocate for STEM education, she's presented at the White House STEM Inclusion Summit, SXSW EDU, UNESCO's Mobile Learning Week, and led the education track at the 2019 UN AI for Good

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