



TECgirls: My AI Future

An AI Research Project and Symposium for Level 3 EPQ

What does Artificial Intelligence mean to you? Are you ready for a future where AI impacts every industry? TECgirls is excited to introduce My AI Future, an AI research initiative and symposium designed to support the Extended Project Qualification (EPQ).

Imagine diving into a topic that sparks your curiosity and lets you explore cutting-edge technology. Artificial Intelligence (AI), is one of the most thrilling areas you can research right now. Don't worry, you don't need to know how to build or code AI. This project is for you to explore the use of AI across subjects you are interested in. My AI Future is crafted to support your Extended Project Qualification (EPQ) with tailored guidance and resources, ensuring that your project aligns perfectly with EPQ requirements.

Why Should You Care About AI?

You might have heard people referring to you as “Gen AI”—a nod to how AI is becoming an integral part of our world. Understanding AI now will prepare you for a future where this technology touches every sector. Demonstrating knowledge and research on AI can strengthen your applications for jobs, apprenticeships, and universities, even in non-tech fields.

Don't worry if you know nothing about AI right now. We're here to support you every step of the way. As part of the program, you'll connect with women working in AI for interviews and receive help finding research related to your interests. Think of us as your AI Aunties, ready to offer advice and introduce you to all the right people!

Why is this for Young Women?

The AI industry is largely shaped by men, which means many diverse voices are missing. We want to ensure young women like you have a chance to contribute your ideas and solutions. We also think it is important that the world hears what young women have to say about an AI future and the impact it might have on society.

However, as an inclusive organisation, our project is open to anyone who supports increasing diverse voices in AI, including those from the trans and non-binary communities.



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Exciting EPQ Ideas with AI

Here are some thrilling research areas you might consider for your EPQ. Hopefully, this shows just of quickly AI is transforming and impacting various fields:

1. AI and Scientific Discovery: Uncover the Unknown

Did you know that the team behind the COVID Vaccine have a huge AI team? Or that space scientists are using AI to help model the unknown? Imagine using AI to speed up scientific breakthroughs—discovering new medicines or solving complex problems. Explore how AI algorithms are helping researchers find new materials or predict health trends. This could lead to future careers in research and innovation.

2. AI in Art: Creating the Future of Creativity

Ever wondered how machines create art? AI tools like DeepArt use algorithms to produce stunning images and designs. Investigate how AI is influencing modern art or restoring historical masterpieces. This research could open doors in digital arts and creative industries.

3. AI in Literature: Analyzing and Creating Stories

Could AI write a book? What about retelling old stories with a new voice? Maybe it could finally cure writer's block! Explore how AI analyzes novels or generates poetry. Study how these technologies are changing reading and writing, providing insights into future trends in literature and creative writing.

4. AI in Law: Shaping Justice

AI is making waves in the legal field by aiding case research and predicting outcomes. Investigate how AI is transforming legal practices or explore the ethical dilemmas of AI in surveillance. What about the use of AI as a judge or in immigration decisions? This topic can prepare you for a career in law or ethics.

5. AI in Veterinary Medicine: Caring for Animals

Can AI help save endangered species? What about treating pets at home? Research how AI assists in diagnosing animal diseases or supports surgeries. Or explore how AI is helping to find and research all new species. AI is even being used to track endangered animals and poachers. This could lead to a future in veterinary medicine, combining your love for animals with cutting-edge technology.

6. AI in Sports: Enhancing Performance

Could AI coach the Lionesses to a World Cup Win? For sports enthusiasts, explore how AI transforms athletic training and game strategies. Study how AI analyzes performance data to prevent injuries or optimize training. This topic could lead to exciting opportunities in sports science and coaching.



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7. AI in Education: Revolutionizing Learning

Should students be allowed to use AI to write their papers? What about teachers using AI to grade coursework? Research how AI-powered tools provide personalized learning experiences or create interactive content. This could inspire new ways to improve education and be especially relevant if you're interested in teaching or educational technology. Or explore critical questions about the use of AI in schools and its impact on how students learn.

8. AI and Environmental Protection: Saving the Planet

Can AI save the planet? Or will it destroy it? Explore how AI helps combat climate change, optimize energy use, or protect wildlife. This research could contribute to solving major environmental challenges and lead to a career in environmental science or sustainability. Or flip it around and research the environmental impact AI is having on the planet as one of the most resource-heavy things humans have created!

9. AI in Healthcare: Enhancing Patient Care

Can AI cure cancer? AI is transforming healthcare by predicting disease outbreaks and personalizing treatment. Investigate how AI supports nurses and doctors in providing better care. You could also look at the challenges around using AI in research in areas with a lack of data like women's health. This topic is highly relevant if you're considering a future in medicine or healthcare.

10. AI and Mental Health: Understanding Impact

Could AI spot if someone is depressed, based on their social media habits? People are already using chat bots to talk to when lonely. What could the future hold for AI therapists. What about the impact AI images that are "too perfect" or people using AI to bully others online? This is a fascinating topic that might already be impacting you and the people you know.

11. AI and Safety: Security and Deep Fakes

Is AI creating a safer world or a more dangerous one? Police are already using AI to find criminals and terrorists. And AI cameras can keep your house safe. But what about when they get it wrong and arrest the wrong person? AI can help keep kids safe online, but it is also being used to create deep fakes that trick people into believing things that aren't true. What kind of power can AI give people and what happens if it falls into the wrong hands?

These are just a few examples. The amazing thing about AI is that it is everywhere, so you can use this project to focus on something you love, while still presenting a cutting edge and impressive research paper.



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TECgirls My AI Future Program Support

We are around to help you with this project however we can. We can provide support for your research, and connect you to industry professionals, and even AI researchers in the top UK Universities.

- **Role Models and Research Support**

Throughout the project, we will share articles and examples of work being done by other women in AI. TECgirls and our partners and friends will also provide support around accessing research, data, and information about AI topics.

- **Public Speaking and Presenting Support**

In late January we will hold an all-day workshop on public speaking and presenting. This will include a hands-on introduction to using programs like PowerPoint and Canva to create engaging slide decks.

- **My AI Future Symposium**

On the 6th of March, we will host an AI Symposium where the students come together to present their research. During the daytime event, students will have a chance to listen to each other and ask questions. This Symposium will be created in line with EPQ requirements with support from the schools. In the evening there will be a second (optional) Symposium where we invite parents, teachers and local women and businesses who are interested in what the students are researching. This will also give you a chance to learn more about opportunities in AI across the South West.

So, why not take the plunge? Dive into a topic that excites you and let your curiosity guide your research. With TECgirls' support, your EPQ can become a journey into the future of technology, creativity, and beyond. We're here to help you every step of the way!

NOTE: This document was created by Caitlin Gould (Human founder of TECgirls) with the help of ChatGPT. That's right, we use AI too!