eSports Programming

Spotlight

Do you love video games and sports? We know that becoming an eSports programmer requires a lot of training in coding and technology, but it isn't too late to learn - this field is growing rapidly, and the technology is rapidly changing in response.

Personal Connection

An eSports programmer is responsible for developing eSports tournament platforms, software, or apps. Becoming an eSports programmer is all about using technology to enable competition at the intersection of video games and sports:

- Do you love the competitive environment of video games and sports?
- Are you interested in learning to code?
- Are you excited by the opportunities that present themselves when you are working in an emerging and rapidly growing field?
- Are you interested in the technology that enables seamless eSports tournaments?

Other Connections

Even if you don't end up becoming an eSports programmer, there are many different career paths that involve technology and video games or sports, including:

- Working as a video game or eSports game developer.
- Establishing eSports teams, programs and arenas at universities.
- Setting up eSports tournaments.
- Working as a video game tester or reviewer.
- Developing sports apps.
- Composing music or creating sound effects for video games.
- Working as a video game or sports data scientist.

Fun Facts/ "Did You Know?..."

Some fun trivia about eSports:

You could be paid to create memes: There are a wide variety of careers in eSports outside of being a player. One of the most interesting paid jobs within eSports was hired by the Philadelphia Fusion eSports team. They paid $17/hour for a meme specialist to create memes that would be posted online to help boost their brand visibility. Read more here.

eSports players make good surgeons: If you need surgery, ask your doctor if he plays video games. "Researchers found that doctors who spent at least three hours a week playing video games made about 37 percent less mistakes in laparoscopic surgery and performed the task 27 percent faster than their counterparts who did not play video games." Read more here.

eSports is bigger than the Super Bowl: Almost 100 million unique viewers tuned in to the "League of Legends" World Championship finals. That's more viewers than the Super Bowl! Read more here.

Competitive programming may be the future of eSports: Imagine eSports required the players to not only have a game strategy, but to code it in real-time. "Technical skills involved would be different: advanced knowledge of programming languages and algorithms would replace incredible levels of dexterity with controllers." As programming becomes a basic skill to learn, competitive programming may become more popular. Read more here.

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STEM Connection

Here are just a few ways that new and emerging technologies are transforming eSports:

- The secret to success in eSports is data analytics: As with any sport, winning is often determined by strategy and analysis of past performance. Developers are creating software that will record and analyze eSport player performance and use algorithms to automatically suggest improvements. eSport platforms are also leveraging data analytics to recommend content and moderate their chat systems. Tournament organizers are even using a data-driven production tool to "automatically detect extraordinary plays and events in live matches and generate graphics designed to help an audience appreciate what is happening." "Where traditional sports have often struggled to capture performance data, the digital nature of gaming competition means that there's no shortage of information." Read more.

- 5G will change the eSports industry: Latency is such an important factor in eSports that the South Korean eSports team travelled to Singapore just to access their faster internet speeds and reduce their latency from 0.16s to 0.06s. 5G will solve this issue by providing faster internet connections and reduced latency around the world. Low latency will also lead to the growth of virtual reality (VR) eSports, because 5G in combination with cloud-based servers will be able to handle the heavy graphics. Read more.

- Blockchain and smart contracts can secure eSports competitions: With eSports tournament prize pools up to $100,000,000, security becomes a concern. "Instant transactions and transparency of such events are important for eSports' reliability." Blockchain smart contracts may be the solution. A Blockchain-powered eSports platform "brings transparency to payments, and smart contracts solve legal issues between developers and tournament organizers." Read more.

- Professional eSports athletes are turning to AI coaches: Developers are training AI to learn eSports games and creating analytics platforms that provide artificial intelligence (AI) coaching to players. The AI-powered coach can assess player stats and suggest better game strategies. "Elite gamers are adopting computer-generated game plans to gain a tactical edge." Read more.

Articles, Videos, and Podcasts of Interest

Watch this TED talk about the benefits of eSports and how it prepares learners for future STEM careers.

Read this blog about all of the different career opportunities in eSports.

Read this article on how to start a high school eSports team.

Read this article about how playing eSports in high school can develop critical skills and prepare you for a career in STEM.

Listen to episodes of this eSports business podcast, including interviews with people in various eSports careers.

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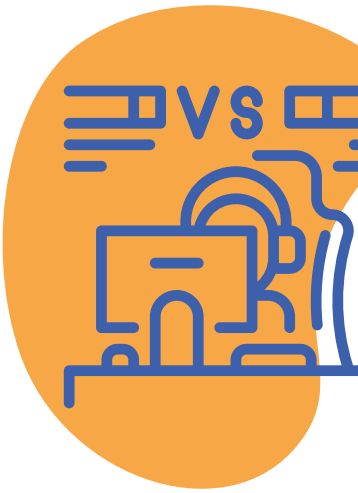
Journeys to Becoming an eSports Programmer

Working in eSports programming may seem like an unrealistic dream, but with so much growth in the field, the career opportunities are endless. You can apply the skills you develop from any field of study to a career in eSports.

Read about one person's career in eSports and his goal to further develop eSports by having students apply their learnings from any field of study:



> James Dean has a computer science degree and started his career in various computer jobs "which always had a game element." He then launched a gaming brand to sell computers specifically built for gaming, and that's when "gaming started to look more like a career possibility, rather than just a personal interest." "We started thinking about what we could do around eSports on a competitive level, and… we sponsored some of the gaming tournaments." He then ran operations for one of the largest gaming peripheral companies in the world that sponsors eSports teams and went on to become the managing director for the world's biggest eSports league.
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> James started thinking about how he could further develop eSports by making them more accessible to a wider audience. He started working with universities "to offer an eSports module that can be attached to any subject the university is offering. You could be doing a law degree and you could take an eSports module to apply what you're learning around law to the eSports industry. Psychology and life sciences, also data analysis and statistics, are particularly interested in doing research. There's a huge amount of data generated by eSports and a lot of stuff to look at in terms of playing habits and data about the individual's playing. That's only just starting now. We're really excited about taking a lead in that."
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> By having students apply their field of study to eSports, they were able to create new technology to improve tournaments. One group of university students performed live data analysis at one of James' eSports tournaments with a new technique they had developed. They were collecting the player data – how the game was being played – and it was being analyzed in real-time to feed statistics to the commentary team.
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> Read more about James' story here.

Read about the middle school students who are already on their way to a career in eSports:

> Grade 7 and 8 students participate in eSports tournaments at a middle school in Maryland. The goal of the tournament is to combine eSports with educational programming to introduce students to STEM. "It lets students explore career paths — many of which are related to gaming — such as coding, audio engineering, virtual and augmented reality, and others." The goal is not to tell students to become professional video gamers, but to expose students to all the possible careers behind it, "from the graphics, to game concepts, to coding… Every company that sells something is going to need people that engineer those experiences."
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> One student, Evelyn, said the tournament "fed into her competitiveness" and that she's now considering a STEM career path. "I want to learn how to code when I'm older."
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> Read more about their story here.

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