Is Artificial Intelligence a Growing Field?

Business operators are always striving for cost savings and performance increases, and those objectives are the main drivers of technological advancements in artificial intelligence (AI). AI is generally defined as computer technology that performs tasks that previously required human intelligence to accomplish. While no computer system has been designed that can fully mimic the behavior of humans, many programs are designed to make decisions and take actions based upon external input. Here are some of the areas where AI is used most, the career path of AI developers and a brief employment profile for the career.

AI Specializations

AI was once only the research subject of a select group of doctoral candidates, but now it has wide application for commercial, government agency and consumer use. For example, AI is used to create expert systems that are able to gather data, process it into information and make intelligent responses to stimuli. This technology has wide application in agriculture, military defense systems and health care surgical procedures. The area of robotics design and development uses AI technology to build machines for industrial entities that are able to work in places that are not suitable for humans like underwater at great depths or in outer space. Consumers also benefit from AI technology when they want to learn a foreign language without employing a human tutor. Voice recognition software enables foreign language students to practice their second language via computer and receive correction if words are mispronounced. AI is widely used in translation software that allows users to convert text from one language to another. Those who like computer games often benefit from contributions to the field of AI when they play online chess against a formidable digital opponent.

Academic and Professional Background of AI Professionals

Most engineers working in the field of AI have an undergraduate [computer science degree](http://www.computersciencedegreehub.com/best/online-bachelors-programs/) or cognitive science as well as an advanced degree in AI. The course work that AI professionals can expect to take during their undergraduate years is varied and challenging; some course subjects include linguistics, programming, statistics, math and philosophy. Advanced degree candidates in AI often take course topics like human computer interaction, data mining and computer system vision and pattern recognition. AI professionals need to cultivate efficient problem solving, logic, analytical and communication skills to be successful. Most AI engineers keep their knowledge of new technology current by taking periodic professional development training, reading industry publications and attending conferences that feature lectures from leading industry experts. All of these activities are most commonly done through membership and participation in professional organizations like the Association for Computing Machinery and the Association for the Advancement of Artificial Intelligence.

Employment Profile for AI Professionals

A high demand exists for skilled AI professionals nationally and abroad. The number of jobs available and salaries depend upon the chosen AI specialization as well as the education and experience level of the job candidate. While entry level positions exist in the career field for those with only undergraduate degrees, the best jobs are reserved for those candidates with graduate or doctoral degrees in AI. Also, there is a clear preference in the industry for AI engineers who specialize in expert systems that utilize face recognition as well as those with backgrounds in robotics. [Annual salaries](http://work.chron.com/salary-degree-artificial-intelligence-29784.html) for these positions range from $92,000 to over $200,000.

Conclusion

Most advances in information technology undoubtedly improve business operational efficiencies as well as product and service quality. However, artificial intelligence systems seek to emulate human behavior, judgment and intelligence, and the development of that technology continues to gain wide appeal.