

EXPLORE

# Artificial Intelligence Engineering



**PennState**  
College of Engineering



The artificial intelligence engineering (AIE) program at Penn State was developed with input from the top hiring companies in artificial intelligence (AI).



Our innovative curriculum provides a broad-based education in the core disciplines and integrative systems of AIE, including computer science, electrical engineering, mathematics, statistics, computational modeling, machine learning, and symbolic computation.

The AIE degree focuses on engineering intelligence, not just applying AI tools. Students gain a strong foundation in math, algorithms, and computing systems while building and deploying AI solutions through hands-on,

real-world experiences. We combine comprehensive coursework; extensive hands-on, practical experiences; and team projects to emphasize learning and discovery, ethics, leadership, and communication skills.

Students also gain valuable fundamental knowledge about the foundations of AI including Mathematics of Machine Learning, Knowledge Representation, Optimization, Machine Learning, Deep Learning, AI Systems and Tools and emerging fields such as Generative AI, Edge AI, AI for Sustainability, and Explainable AI, alongside specialized roles in areas like AI safety and security, AI-driven design, and robotics.

Our graduates are trained to become future leaders in an ever-evolving, critical industry, who will go on to make a positive impact on global society and contribute to programs of international importance.

For more information about EECS at Penn State, visit [eecs.psu.edu](https://eecs.psu.edu).



**Math, Statistics, Computer Science, Algorithms, Data & Modeling, Machine Learning**

Students who excel in these areas tend to do well in AIE. Our areas of specialization build on these skills to design, develop, and apply intelligent systems to real-world problems.

## Engineering Co-Op & Internship Program

Integrate classroom learning with real-world experiences.



## Study Abroad Programs

Gain a worldwide perspective as you develop foreign language skills, cultural understanding, and professional experience.

## Graduate Program

Broaden educational credentials and improve your marketability in the global workplace.

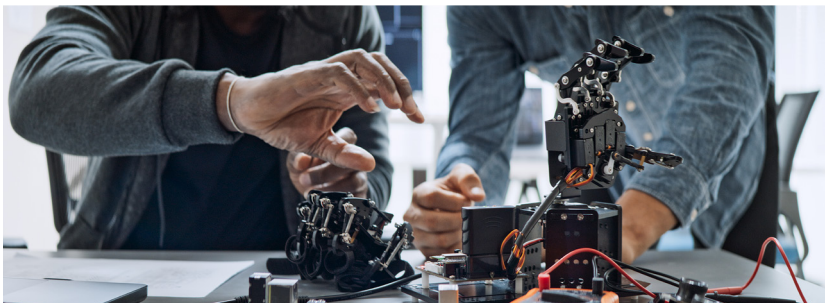


## Global AI Market

The AI market is to grow more than 36 percent annually through 2030 alone, creating new jobs in industries like health care, finance, engineering, and public policy.

**AIE**

Learn more about the AIE degree at [bit.ly/PennStateEngineering](https://bit.ly/PennStateEngineering)



## What is an artificial intelligence engineer?

Artificial intelligence engineers develop, program, and train complex algorithmic systems that perform tasks typically requiring human intelligence. By writing code, creating machine learning models, and deploying AI applications, artificial intelligence engineers build systems that can learn from data and make decisions to solve real-world problems.

**Examples of career opportunities:** There is a growing demand for artificial intelligence engineers in health care, eCommerce, finance, manufacturing, transportation, cybersecurity, marketing, robotics, and software.

[eecs.psu.edu](https://eecs.psu.edu)

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**Dan Grillo**

Vice President of Engineering, LinkedIn  
'92 Computer Science

*"This innovative program is a crucial step in equipping the next generation of tech leaders with the advanced skills and knowledge needed to drive impactful AI advancements across industries, and I look forward to working with the talented students it will inspire."*