The truth is in your data. The challenge is actually finding it.

Organizations are increasingly turning to machine learning and A.I. to mine their data. Machine learning leads to recommendation engines and streamlined operations, while A.I. can serve as decision augmentation. As a leader, you can harness their power to enhance critical decisions. Rensselaer’s Machine Learning and A.I Graduate Certificate prepares you to identify problems before they are apparent, get closer to your customers’ needs, and move more quickly than competitors.

The Machine Learning & A.I Certificate consists of three courses:

- **ENGR 6220: Data Architecture**
  Design and deploy systems that serve as the basis for the machine learning process. Choose appropriate learning models using decision tree, Bayesian, neural network and vector machine approaches. Use multiple statistical approaches to evaluate output that leads to best results.

- **ENGR 6221: Machine Learning Frameworks**
  Develop predictive models for the least likelihood of unintended variance and build natural language and recommendation engines for common applications such as sales enhancement. Survey results and tune recommendation models to achieve more accurate predictions and determine best next steps.

- **ENGR 6222: Deep Learning in AI Systems**
  Working directly with a faculty member, build machine learning systems that can be used for decision making intelligence, where learning systems transition from recommendations to decision capacities. Over the semester, propose and develop a model, and train the system to improve performance.

Explore Rensselaer’s Education for Working Professionals program at a 30-minute Informational Webinar or schedule a Professional Consultation at ewp.rpi.edu/contactus. You can also reach us by email at ewp@rpi.edu or by phone at 860.548.2403.

Education for Working Professionals

All courses are delivered using Rensselaer’s digital classroom – the Rensselaer Studio.

Certificates are 9 credit hours and can be completed in a year or less.

Complete projects that address real-world business challenges.

Master new tools and techniques that can be leveraged to elevate your role at work.

Projects involve the context of your work, helping you to perfect your abilities while simultaneously providing value back to your employer.

Faculty Practitioners provide industry expertise, advice, mentorship, and encouragement.

Students have the option of completing just one certificate or combining multiple certificates into a customized master’s degree.

All certificates are offered for graduate-level credit and require admission to Rensselaer’s graduate programs.

Certificates are designed so that you can fully participate in classes from anywhere in the world.
Machine Learning and A.I. is one of eight graduate certificates that allow you to develop in-depth expertise quickly in a mission-critical area. Visit [ewp.rpi.edu](http://ewp.rpi.edu) for an updated listing of certificates offered and program course descriptions.

**MANAGING TECHNICAL ORGANIZATIONS**
Prepares you to add more value to your work and employer as you practice dynamic organization leadership while understanding markets, developing strategy and people, and evaluating performance.

**LEADING CHANGE and INNOVATION**
Transform your approach at work as you develop purposeful and intentional leadership needed when facilitating change that is clear and precise while minimizing uncertainty and unintended consequences.

**BUSINESS INTELLIGENCE**
Take control of the flood of data from across the enterprise by mastering data-driven decision making, business intelligence analysis, while modeling findings you and your employer can rely on.

**PRODUCTION ANALYTICS**
Model your production accurately using data, logistics analysis and modeling decisions to differentiate true intelligence from ‘hunches’, unknowns into knowns, and make the best use of data possible.

**MACHINE LEARNING and A.I.**
A massive competitive advantage, develop expertise in data architecture, machine learning frameworks, and deep learning in AI systems to identify problems before they appear and get closer to your customers.

**SUPPLY CHAIN and LOGISTICS**
Empower your operation by ensuring suppliers are capable, inventory is managed, distribution and warehousing logistics are in order, and the software integrating planning and operations works harmoniously.

**SYSTEMS ENGINEERING**
See the ‘whole picture’ of your organization, develop skills to optimize systems and processes to bring costs and inventory under control, and enhance your role in moving the organization forward.

**LEAN QUALITY in PRODUCTION**
Design and optimize complex systems and upgrade your credentials as a Lean Six Sigma I and Lean Six Sigma II practitioner who replaces slow, outdated processes with an approach you can count on.

**MASTER of SCIENCE in ENGINEERING SCIENCE**
Stack any three certificates of your choice to complete a Master of Science in Engineering Science degree with a final, integrative project.

**SYSTEMS ENGINEERING and TECHNOLOGY MANAGEMENT**
The Systems Engineering and Technology Management degree includes two certificates of your choice and four core courses to complete the degree.

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