Unlock real-time intelligence in academia with AVEVA™ PI System™

Empowering education, research, and sustainable campus operations through industrial-grade data infrastructure

What is AVEVA PI System?

AVEVA PI System is a leading real-time data platform trusted by organizations worldwide to collect, analyze, visualize, and share high-frequency operational data. Now available to universities, AVEVA PI System brings cutting-edge technology to the classroom, lab, and campus facilities.

PI System is widely applied in fields such as Engineering, Computer Science, Data Science, Industrial Automation, Computer Science and others.

It empowers students the future engineers with critical skills like real-time monitoring, data-driven decision-making, and applying Industry 4.0 and digital twin principles. These are essential capabilities in today's fast-evolving, data-centric industries.

Application for PI System in courses:

- Time-series data collection and storage
- Asset-centric data modeling
- Data visualization with PI Vision
- Analysis of operational data

Skills:

- Real-time monitoring
- Data driven decision making
- Industry 4.0 and digital twin principles

Why do universities choose AVEVA PI System?

Benefit to academic institutions	Real-world impact
Advance research by supporting high-impact research in smart grid analytics, process optimization, predictive maintenance, and other fields.	SNOLAB, the world's deepest underground lab located 2 km below the surface in Canada's Sudbury Basin, conducts highly sensitive particle physics experiments to detect dark matter and neutrinos. To maintain precise environmental conditions and operational continuity, SNOLAB deployed AVEVA PI System and other solutions to unify data sources, monitor critical systems, and reduce risk of downtime. **Key results:** • 66% reduction in infrastructure (UPS) costs by accurately calculating backup power needs • Empowered over 1,000 scientists from 164 institutions to create custom dashboards and remotely track project data • Enabled remote monitoring and root-cause analysis for mission-critical experiments • Maintained ISO 6 cleanroom standards with real-time particulate monitoring
Enhance teaching and learning by integrating next-gen digital tools into engineering, data science, and sustainability programs.	Situated in the heart of California wine country, the University of California Davis (UC Davis) partnered with Cypress Semiconductor and T.J. Rodgers to deploy one of the world's first wireless, automated fermentation systems. It equipped 152 tanks with sensors for real-time temperature, pump-over control, and sugar measurement. **Key results:** • Enhanced precision and reproducibility in fermentations for teaching and research • Accelerated data-driven experimentation in areas like yeast population and wine chemistry • Positioned as a global benchmark in environmental and process innovation within academia

Optimize campus operations and sustainability by monitoring and improving energy, water, and emissions across facilities for a smarter, greener campus.	Aiming for campus-wide carbon neutrality by 2025, UC Davis partnered with AVEVA to optimize energy use across over 1,000 buildings. By leveraging the AVEVA PI System™, PI Vision™, and System Platform, the university improved HVAC scheduling, enhanced real-time data visibility, and executed major infrastructure upgrades like "The Big Shift" from steam to low-temp hot water heating. **Key results:** • $150,000 expected annual savings from chilled water optimization • 62% reduction in gas usage from heating system retrofit • 46% reduction in energy-use intensity since 2009, saving $15M • $197M projected long-term savings over 60 years
Support student development and job-readiness by equipping students with skills in widely used industrial tools.	Georgia Tech researchers, led by Professors Santiago Grijalva and Vincent Mooney, and with support from GTRI, NREL, Southern Company, and AVEVA, are developing GridLogic, an AI-powered cybersecurity framework to protect electric power systems. GridLogic is setting a new standard by, showcasing the power of AI, deep system awareness, and secure-by-design hardware, supported by AVEVA's real-time PI and simulation tools for real-world protection in complex energy environments. **Key results:** • Hands-on learning making a real-world impact • Full cyber-physical protection • AI-based threat detection • Deep network visibility • Broader critical infrastructure applications

What offerings are available to academic institutions?

- **Academic licensing** – Get full access to AVEVA PI System software for students and faculty.
- **Curriculum integration** – Deploy lab-ready tools and real-world datasets for hands-on instruction.
- **Research support** – Collaborate on innovation in energy, circular economy, and industrial analytics.
- **Sustainability dashboards** – Track resource use and drive efficiency campus-wide.
- **Build a real-time digital twin** — Get a single, trusted source of high-fidelity data to discover valuable insights, make better decisions, and reduce your operational expenses.

> "Learning AVEVA PI System gave me a competitive edge in my job search - it's what real industries use."
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> **Graduate student, Engineering**

"The AVEVA PI System provides a comprehensive platform for showcasing our Ethernet-APL Module using the Plant Information Management System. Our goal is not just to create a digital twin; we aim to leverage AVEVA's enhanced functionalities, including advanced analytics, to maximize the value of additional data obtained through Ethernet-APL.

With AVEVA's powerful analytics capabilities, we will develop a model that enables both preventive and predictive maintenance. This model will allow us to identify maintenance needs proactively and efficiently, using insights from the enriched data sets provided by Ethernet-APL. The integration of these advanced functions will ensure that our operations are not only optimized for current performance but are also prepared for future challenges, enhancing overall reliability and operational excellence."

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Alen Mahendrarajah
Research Assistant at the Cologne University of Applied Sciences
and Team Leader of the APL project in the PLT laboratory

Leading institutions are progressing with AVEVA PI System—Join them.

Universities worldwide use AVEVA PI System to bridge classroom learning with industry realities. Whether you're aiming to transform your sustainability efforts or prepare students for digital careers, AVEVA PI System can help you lead the way.