Our Mission

Heidi AI's mission is to provide every student with access to their own personal super-computer, ensuring that all students, regardless of their economic background, have the tools they need to succeed and reach their full potential.

Heidi AI: Supercomputing for K-12
Your Cloud-Based Personal AI Supercomputer for Grades K-12

Introducing cutting-edge technology to high school classrooms can be daunting. Schools often lack access to high-performance computing (HPC) resources and AI infrastructure, and building or maintaining such infrastructure can be prohibitvely expensive. Educators face challenges integrating computational tools into their curricula, from accessing preloaded datasets to finding software that bridges technical complexity with student-friendly learning environments. Heidi helps future-proof technology and will support quantum computing when perfected.

Heidi for Grades K-12 is a cloud-based, SaaS supercomputing platform designed to make HPC & AI accessible and affordable for educational institutions. Heidi leverages powerful infrastructure, preloaded datasets, and educational tools to help students simulate real-world phenomena, build AI applications, and explore advanced computational concepts. With partnerships that include leading scientific organizations, some funded by grants from the US Department of Energy, Heidi ensures educators and students alike are equipped with world-class resources to achieve hands-on learning in science, technology, engineering, and mathematics—all at an accessible per-student annual price.

Heidi's cost per student is less than the cost of a textbook. Heidi also integrates with on-premises data centers.

Cloud-Based Supercomputing for Education: HPC, AI, and STEM Solutions with Heidi

Heidi Workshops

Heidi enables educators to host educational workshops, giving each student access to their own AI & HPC supercomputer. By simply sending an access code to their students, teachers can now empower their classes with supercomputing capabilities, whether in the cloud or on-premises.

- Seamlessly allocate a dedicated HPC & AI supercomputer to every student.
- Access a structured curriculum, with best practices, interactive 3D renderings, and 150+ preloaded AI and HPC applications.
- Customize student workflows with flexible controls for real-world AI and computational challenges.

Heidi Technology Stack

Heidi empowers students and educators by providing an accessible, cloud-based supercomputing platform tailored to K-12. It simplifies the integration of HPC & AI into classrooms with preloaded datasets, easy-to-use tools, and scalable infrastructure.

- Features the On-Demand Data Center (ODDC) for cloud access and automated infrastructure deployment.
- Includes a comprehensive curriculum on building and deploying HPC & AI clusters in the cloud.
- Scales resources effortlessly while ensuring secure and reliable access via cloud-based infrastructure.

ParaTools Pro for E4S™ - Extreme-scale Scientific Software Stack

ParaTools Pro for E4S™ utilizes Heidi's robust infrastructure to provide students and educators with an integrated suite of HPC & AI tools designed specifically for educational environments. Assembled under a DOE (U.S. Department of Energy) grant and included in the Adaptive Computing Technology Stack, ParaTools Pro for E4S™ simplifies the deployment of complex applications and empowers students to explore cutting-edge technologies in a hands-on setting. With over 150 preloaded applications, including TensorFlow, PyTorch, and Keras, ParaTools Pro for E4S™ enables learners to seamlessly engage in HPC & AI, computational science, and STEM-focused challenges using Heidi's robust infrastructure.

- Supports specialized hardware, including GPUs and high-speed network adapters on Azure.
- Integrates seamlessly with Slurm, Moab/Torque, and MPI environments for efficient workload management.
- Provides a unified experience across commercial cloud environments, ensuring flexibility and scalability.

Heidi AI Excellence Scholarship

Beginning in **2026**, each Heidi school district will be invited to submit one or more student created AI applications for a chance to be awarded a $10,000 scholarship for each team member, up to $50,000 per team.

Features

- Data privacy and security
- Customizable learning modules
- Hands-on experience with industry-standard tools
- Remote accessibility
- Cross-disciplinary applications
- Built-in analytics for educators
- Teacher training and support
- Plug-and-play deployment
- Collaboration friendly
- Preloaded datasets supporting image classification

Benefits

- Easy integration into K-12
- Flexible infrastructure tailored for schools
- Accessible via any web browser
- Intuitive and student-friendly interface
- Real-world HPC & AI training experience
- Includes TensorFlow, PyTorch, and much more
- Affordable, per-student annual pricing
- No lock-in with any Cloud Service Provider
- Multi-node scaling for collaborative learning
- Pay only for additional compute when needed

Heidi Delivers Advanced Learning Opportunities for Students in HPC, AI, STEM, and Beyond

Heidi is designed to empower students across K-12 with hands-on learning experiences in HPC, AI, and other computational sciences. By providing accessible, cloud-based supercomputing resources, Heidi enables educators to incorporate advanced computational tools into their curricula. Here are key use cases illustrating how students can learn and benefit from Heidi's capabilities:

- **Environmental Science:** Simulate weather patterns, model the effects of climate change, or explore deforestation impacts using preloaded climate datasets.

- **Physics:** Experiment with fluid dynamics, aerodynamics, or material stress simulations to enhance understanding of Newtonian mechanics and advanced physics concepts.

- **Biology and Genomics:** Dive into protein folding, DNA sequencing, or disease modeling with tools that integrate biology and computational science.

- **Chemistry:** Model chemical reactions and molecular interactions to study real-world applications in medicine and pharmaceuticals.

- **Data Science and AI:** Train machine learning models, analyze large datasets, and explore data visualization techniques in preparation for AI-driven careers.

- **Space and Astronomy:** Simulate planetary orbits, black hole activity, or star formation using astrophysical datasets for an engaging take on space science.

- **Engineering:** Perform stress tests on virtual bridges or simulate wind resistance in vehicle designs, applying engineering principles in computational environments.

- **Social Science and Economics:** Run simulations on population dynamics, disease spread, or economic outcomes, introducing HPC to humanities and social sciences.

- **Mathematics:** Explore advanced computational problems, such as optimization and algorithm development, with access to high-performance tools.

- **Technology:** Build, test, and deploy small-scale AI applications to understand the basics of programming and machine learning workflows.

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About Adaptive Computing
Adaptive Computing is a global software company headquartered in Naples, Florida, USA and has provided advanced applications and tools to the High-Performance Computing industry for over two decades with hundreds of deployments on the world's largest computing installations. Adaptive Computing products and services are used by organizations of all sizes across a broad range of industries such as High-Tech Manufacturing, Aerospace Engineering, Defense, Universities and Research Labs, Life Sciences, Oil and Gas Exploration, Financial Services, and Data Analytics. Some of the world's largest clusters, grids, and data centers use Adaptive's Moab HPC Suite and Cloud Solutions to maximize performance and value, simplify management, and create a competitive advantage.