

Shreyas Rane

Academic Technology and AI Education

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PROFESSIONAL SUMMARY

Computer science educator and program leader with six years of independent-school experience. Manages an eight-course CS and AI program and co-leads faculty AI professional development at St. Paul's School. Builds curricula, responsible-AI guidance, and assessments that make student reasoning visible. Published in CSTA's The Voice; pursuing graduate study in learning analytics and artificial intelligence at Penn.

PROFESSIONAL EXPERIENCE

Computer Science Teacher

2024 - Present

St. Paul's School

Concord, NH

- Manage an eight-course computer science and AI program spanning introductory programming, algorithms, mathematical foundations, machine learning, and applied AI and robotics.
- Designed and led AI professional learning for approximately 30 faculty across disciplines; jointly assigned to plan faculty AI professional development for the 2026-27 academic year.
- Developed responsible-AI and academic-integrity guidance on appropriate assistance, disclosure, privacy, and evidence of understanding; presented it to the school AI task group and contributed to the draft school policy.
- Launched three advanced electives in machine learning, embedded systems, and applied AI and robotics; helped design and launch a computer science laboratory serving more than 40 students annually.
- Developed and piloted verification-based assessment across four courses, requiring students to explain, test, adapt, and defend AI-assisted work through checkpoints that make their reasoning visible.
- Authored a 30-page, research-grounded prompt-engineering guide connecting practical AI use with problem formulation, metacognition, iteration, and source evaluation.
- Evaluate generative-AI tools and prototype instructional and administrative workflows, including Gemini and NotebookLM demonstrations for admissions and college counseling, with privacy safeguards, source verification, and human review.
- Mentor more than 10 students annually through the Applied Sciences and Engineering Program on research in AI, robotics, engineering, and algorithms.

Mathematics and Computer Science Faculty

2020 - 2024

The Taft School

Watertown, CT

- Expanded the computer science curriculum from three courses to six, adding advanced study in data structures, algorithms, mathematical foundations, and machine learning.
- Designed a course-sequencing framework and mentored more than 15 student projects in algorithms, mathematical modeling, and machine learning.
- Served three summers as Head of Mathematics, leading a four-level program for more than 60 students and supporting faculty instruction and assessment.

EDUCATION

University of Pennsylvania

Expected 2028

Graduate School of Education

M.S.Ed., Learning Analytics and Artificial Intelligence

Current coursework: Educational data mining; dashboards for discovery and learning applications.

Rutgers University - Camden

May 2020

Bachelor of Science in Computer Science

Honors College; Dean's List; Chancellor's Scholarship

Professional learning: Applied and Generative AI, Johns Hopkins University; AP Computer Science A, Taft Educational Center.

PUBLICATIONS AND RESEARCH

AI Has Not Made Computer Science Assessment Obsolete. It Has Made Verification Essential.

CSTA's The Voice, Computer Science Teachers Association | September 2026

Published article on assessing student reasoning through explanation, testing, and adaptation of AI-assisted programming work.

Beyond Algorithmic Guarantees: Ethical Limits of AI Reliability in K-12 Classrooms Understood as Complex Adaptive Systems

Preprint, April 2026 | Under peer review at AI and Ethics, Springer Nature

Examines AI reliability, teacher judgment, and governance in K-12 education.

Classrooms as Complex Adaptive Systems: A Verification-Theoretic Framework for Teacher Use of Generative AI in K-12 Education

Preprint, 2025 | ResearchGate; under journal review

ADDITIONAL LEADERSHIP AND SCHOOL COMMUNITY

Founder and Editor-in-Chief | Rutgers Insight | 2019 - 2020

Founded an undergraduate research journal with the Rutgers Honors College, led a 10-member editorial board, and published more than 30 articles in its inaugural year.

Student Advisor and JV Field Hockey Coach | St. Paul's School

Support students through advising, athletics, and residential school responsibilities.

SKILLS

Program and learning design: Curriculum development, course sequencing, faculty professional development, assessment design, academic integrity, student research advising.

Educational technology: Canvas, Google Workspace for Education, Gemini, NotebookLM, ChatGPT, Claude, prompt design, AI-output verification, workflow prototyping.

Technical foundation: Python, Java, SQL, TensorFlow, scikit-learn, machine learning, robotics, Arduino, ESP32, Raspberry Pi.