Eric Allatta | Math and CS Teacher

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"When we try to pick out anything by itself, we find it hitched to everything else in the universe." – John Muir

Summary

Enthusiastic urban adolescent computer science and mathematics teacher set to re-enter the classroom in 2025, bringing a decade of experience in supporting diverse student and adult learners in NYC public schools. Specialized in computational modeling, data science, and problem-solving, with a strong belief in the power of thoughtful computing integration and the importance of iteration for both institutional and personal growth. Committed to offering multiple opportunities, entry points, and perspectives, and dedicated to equipping students for college with meaningful and challenging learning experiences that support all learners.

Certification & Licensure

- NY 7-12 Mathematics Professional Certification.
- Currently pursuing NY K-12 Computer Science Certification, anticipated completion by June 2027 or sooner.

Teaching & Department Leadership Experience

Academy for Software Engineering — **New York, NY**
Mathematics & Computer Science Teacher, Data Specialist — *2012–2021*

- Taught Algebra, Computational Mathematics, and various programming courses, incorporating Bootstrap's modeling curricula, integrating data science, algorithmic thinking, and real-world problem-solving to strengthen students' readiness for Precalculus, AP Statistics, and advanced STEM coursework.
- Developed lessons using data visualization and large datasets for function modeling, meeting NY Next Generation Math (+) Standards.
- Utilized a variety of pedagogical strategies, including structure diagramming, function design, research, written reflection, peer feedback, and visualizations analysis to strengthen analytic geometry, statistics, and algebraic reasoning essential to Precalculus.
- Designed a school-wide AP CS Principles program, focusing on algorithmic problem-solving and mathematical modeling, with successful student outcomes despite exam misalignment.
- Explicitly collaborated with departmental colleagues to vertically align Algebra, Computational Mathematics, and AP Statistics and aligned to Precalculus curriculum with an emphasis on computational modeling connections.
- Implemented data-driven interventions, significantly improving Algebra Regents pass rates through targeted analysis and support.
- Maintained a 95% graduation rate, mentoring students, engaging families, and building life-long relationships through our advisory program.
- Developed digital tools for instructional efficiency, facilitating teams focused on course completion, mastery-based learning, intervention tracking, and student progress reporting.
- Mentored young women in STEM, guiding them to present data science projects at Bloomberg and ISTE, leading to scholarships and internships.

Bronx Center for Science and Mathematics — **Bronx, NY**
Urban Teacher Resident — *2011–2012*

- Designed and led full-year Algebra II/Trigonometry, reinforcing students' understanding of functions, polynomials, and trigonometric reasoning, culminating in Regents scores surpassing citywide averages.
- Completed structured teacher inquiry project on assessment-driven instruction to strengthen student outcomes in higher-level mathematics.

Teacher Training & Thought Leadership

Bootstrap, Rutgers, CS Alliance, SFPS **Remote**

EdTech Consultant, Teacher Mentor, & Curriculum Developer *2021–Present*

- Conducted educator workshops to train K-12 teachers on integrating data science and computational modeling into mathematics curricula, explicitly connecting data-driven approaches with Next Generation Math Standards and Precalculus topics.
- Tutored advanced mathematics students in applying computational modeling and data-driven problem solving methods, focusing on topics foundational for success in Precalculus and beyond.
- Mentored and trained K-12 teachers in integrating computational mathematics, data science, and real-world applications into their curriculum.
- Developed expertise in data engineering, strengthening ability to teach applied mathematical reasoning and modeling.

Bootstrap **New York, NY**

Senior Master Teacher *2014–Present*

- Trained and mentored hundreds of math and CS educators nationwide in computational mathematics, leading regular coaching, review, and individual support sessions.
- Facilitated nationwide educator training sessions emphasizing the integration of computational modeling, analytic geometry, and data science instruction related to mathematics standards.

Math for America **New York, NY**

Early Career & Master Teacher Fellow *2013–2021*

- Developed and led workshops for top NYC math and science educators, introducing functional programming techniques, to enhance math education with computing and data science integration.
- Attended monthly professional development in advanced mathematics and pedagogy.

Research & Curriculum Development

Academy for Software Engineering with Bootstrap **New York, NY**

Computational Algebra Researcher *2013–2014*

- Conducted a controlled study on functional programming design pedagogy in Algebra I, measuring its impact on word problem decoding and function building.
- Perseverance in correctly solving modeling word problems with functions increased by 90-111% in experimental groups, while control groups saw a 39% decline.

CollegeBoard

AP CS Principles Pilot Curricula Developer and Assessor *2013–2017*

- Developed and assessed AP CS Principles pilot curricula, incorporating computational thinking and data-modeling skills valuable in paving strong foundations for success in mathematically rigorous courses, particularly Precalculus.
- Collaborated on curriculum design with national teams (EarSketch, BJC, Bootstrap, CSNYC), leading to training teachers through these organizations.

Education

Hunter College **New York, NY**

Master's in Urban Adolescent Mathematics Education *2011–2012*

Completed through the Urban Teacher Residency Program (New Visions for Public Schools) at Bronx Center for Science and Mathematics.

St. John's College **Santa Fe, NM**

Bachelor of Arts in the Liberal Arts *2003–2007*

Seminar-based curriculum focused on Philosophy, the History of Mathematics & Science, Comparative Literature, and Linguistics.

30+ Credits Additional Coursework: Berklee College of Music, DeVry University (Core musical studies, production, and electrical engineering).

Presentations

Rutgers University. **Virtual**
So This is CS! *2022*

Presentation for NJ middle school math teachers developed under Fran Trees, who is one of the developers of AP CS Principles, connecting computer science to math learning standards. https://mrallatta.github.io/thisiscs/. Accessed: 2025-03-31.

SIGCSE 2018 **Baltimore, MD**
Five Slides About: Engaging the CS Principles Explore Task, SIGCSE 2018 *2018*

Colleen Lewis from CS Teaching Tips invited me to present at a 5 slides about session on the CS Principles Performance task. I leverage the abstraction model $input \rightarrow transformation \rightarrow output$ when interpreting current events in computing.

Math for America **New York, NY**
Introduction to CS Workshops *2016–2020*

Led workshops on functional programming, data science, recursion, and computational mathematics pedagogy. https://mrallatta.github.io/introcs-workshop/. Accessed: 2025-03-31.

SIGCSE 2015 **Kansas City, MO**
Technology We Can't Live Without! *2015*

Dan Garcia from Beauty and Joy of Computing invited me to present on a teacher tools panel. At the time I couldn't live with Doctopus and WeScheme and was giving workshops on how to manage Google Docs for programming projects.

James Madison University **Harrisonburg, VA**
Using Google Apps Scripts for Classroom Management *2014*

I designed and facilitated workshops on using early Google scripts written by Andrew Stillman. It was all the rage in 2014. https://w3.cs.jmu.edu/mayfiecs/cta14/files/Allatta/GoogleAppsScripts.pdf. Accessed: 2025-03-31.

Articles

EdSurge
Solving for X and Y in a School Focused on Math and Computer Science *2016*

This recounts the early history of the Academy for Software Engineering and the curricular decisions that we made as we built a new computer science education for all students. https://www.edsurge.com/news/2016-07-16-solving-for-x-and-y-in-a-school-focused-on-math-and-computer-science. Accessed: 2025-03-31.

Medium
Winning Essay for the Inaugural CSTA Excellence in CS Teaching Award/Grant *2016*

I won a $10,000 grant based on the strength of this essay, recommendations, and advocacy for leveraging the mathematical side of computer science rather than presenting it as an alternative. https://medium.com/@eallatta/eric-allatta-2016-awards-for-teaching-excellence-in-computer-science-application-2ae514e7a8c9. Accessed: 2025-03-31.

Chalkbeat
Yes, any teacher can help the city spread computer science. No, not any training will do. *2015*

This is a first person account of coming from a non-traditional background and finding success in the burgeoning CS for All initiative, encouraging other teachers to jump in. https://www.chalkbeat.org/newyork/2015/10/22/21096178/yes-any-teacher-can-help-the-city-spread-computer-science-no-not-any-training-will-do/. Accessed: 2025-03-31.

Interviews

Rex Academy
Episode 17: Eric Allatta, Math & CS Teacher at Academy of Software Engineering *2020*

I talk about mastery-based learning, self reflection, and growth mindset. https://www.youtube.com/watch?v=JAc-5zSoHQU. Accessed: 2025-03-31.

The New York Times Learning Network
Cross-curriculum connections | Teaching with Graphs from the New York Times., Accessed: 2025-03-31. *2018*

Sharon Hessney, the creator of NY Times What's Going on in This Graph?, visited my classroom and coached me on Notice & Wonder pedagogy and utilizing WGoiTG? in the classroom. Sharon taught me the sentence started "I wonder if ..., because ..." Wondering is not just asking a question, it is conditionally formulating possible answers, empowering all students to dig into what they notice. https://www.youtube.com/watch?v=WecYohd7iOs. Accessed: 2025-03-31.

CSTeachingTips.com
Teaching Tips *2015*

Tips from my classroom curated by Colleen Lewis. https://www.csteachingtips.org/taxonomy/term/367. Accessed: 2025-03-31.