Elijah Sanderson

Student at Wentworth Institue of Technology

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Education

Wentworth Institute of Technology 2018 – Present
BS in Applied Mathematics CGPA: 3.87 Math GPA: 3.96 Boston, Massachusetts

- Relevant courses: Single and Multivariable Calculus, Differential Equations, Numerical Analysis, Linear Algebra, Probability and Statistics, Abstract Algebra, Complex Variables, Proof Writing

Long Trail School 2014 – 2018
International Baccalaureate (IB) Diploma CGPA: 94 Dorset, Vermont

- Relevant courses: IB Higher Level Mathematics, IB Higher Level Physics

Academic Projects

- Meill, Butts, Sanderson, 2020: *Entanglement Properties of Symmetric Quantum Systems* *In Progress*
  - This project aims to apply some fundamental properties of groups to the entanglement states of quantum systems.
- LeBlanc, Liberatore, Sanderson, 2019: *Fermat Numbers, Goldbach's Theorem, and the Infinitude of Primes* Fall 2019
  - Analyzed properties of Fermat numbers using mathematical induction.
- Butts, Leblanc, Sanderson, 2019: *Free Groups* Fall 2019
  - Abstract Algebra final paper which analyzes the properties and applications of free groups.
- LeBlanc, Sanderson, 2019: *Java Periodic Table* Spring 2019
  - Computer Science II final project which gives the user an interactive graphical display of the Periodic Table of the Elements.
- Akgun, Sanderson, Schmuch, 2018: *SIR Model Using Vaccinations* Fall 2018
  - Foundations of Applied Math final paper which analyzes the theory and implementation of SIR models using R on a given population to measure the effect of a disease.
- Sanderson, 2018: *Optimization: A Method to Expand Binomials Raised to* the nth Power, where $n \in R$ Spring 2018
  - IB HL Mathematics Internal Assessment which analyzes a method to extend the definition of the binomial expansion to those which have non-integer powers.
- Sanderson, 2018: *Finding an Unknown Variable Based on the Equation for the Launch Angle* Spring 2018
  - IB HL Physics Internal Assessment which examines the formula for launch angle of a projectile and attempts to mathematically manipulate the equation to figure out an unknown quantity.

Skills

- Software: MATLAB, Mathematica, Adobe Suite, Microsoft Office, Logic Pro
- Programming languages: LaTeX, R, Java, JSON, Python
- Interests: Complex and Real Analysis, Number Theory, Group Theory, Physics

Awards and Extracurriculars

- Achieved Dean's List for each semester at WIT
- Member of WIT Society of Industrial and Applied Mathematicians (2019-present)
- Member of WIT Billiards Society (2018-present)
- Coordinated and participated in the 2019 William Lowell Putnam Competition
- Compose and produce music using Logic Pro
- Releasing fully-programmed "adventure maps" for *Minecraft* online

References

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