**EDMOND MBADU**

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**EDUCATION**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chestnut Hill College, Philadelphia, PA** *Bachelor of Science in Mathematics and Computer Science, May 2020* GPA:3.92/4.0 9n Selected Coursework: Abstract Algebra I & II (Spring 2017, Fall 2018), Real Analysis (Spring lovin2019), Algorithms in Artificial Intelligence and Robotics (Spring 2019), Mobile App Development lovig(Fall 2019), Data Structures (Fall 2017), Computer Architecture & Logic Design (Spring 2019) love Topology ( Spring 2020)

Dean’s list 7/7 semesters

**PUBLICATIONS** **&** **PRESENTATIONS**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Mbadu, Edmond, Why Elliptic Curve Diffie-Hellman is replacing Diffie-Hellman. *The Journal of Computing Sciences in Colleges.* October 2019. Vol 35, 218.
* Mbadu, Edmond, The Mathematics Behind Mirror Anamorphosis. *EPaDel Fall 2019 Section Meeting,* DeSales University. <http://sections.maa.org/epadel/meetings/2019/fall/students.php>
* Mbadu, Edmond, Past and Modern Encryption Methods. *SEPCHE Honors Conference.* March 23, 2019.
* Mbadu, E., Adew, M., Kuvuna, C. Worldwide Education. *Designs for A World That Works for All.* 2017. (pp 266-276). PA: BigPictureSmallWorld Inc. <https://www.amazon.com/Designs-World-that-Works-All/dp/1986822664>

**HONORS & AWARDS**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Best Student Paper at the Consortium for Computing Sciences in Colleges, Eastern Region (CCSC Eastern) 2019. <https://sites.google.com/site/ccsceastern/past-conferences/2019awards>
* Recipient of the Saint Catherine Medal 2019.

**SKILLS**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Programming Languages:* (Proficient) Java; (Familiar) Python, C, Swift, Ruby. *Frameworks:* Git, GitHub

*Spoken and written languages*: English, French, and Lingala

*Others*: pianist

**RESEARCH EXPERIENCE**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Research Student***

* The Mathematics Behind Mirror Anamorphosis, Chestnut Hill College (Fall 2019)
* Developed a program using Java to compute and display transformations of cylindrical and spherical mirrors. The code can be found here: <https://github.com/EdmondMbadu/Anamorphosis_Cylinder_Transformation.git>

<https://github.com/EdmondMbadu/Anamorphosis_Spherical_Transformation.git>

* Elliptic Curve Cryptography, Chestnut Hill College (Spring 2018)
  + - * + Used the Baby-step giant-step algorithms to test the efficiency of two most used algorithms of the Diffie-Hellman protocol, Elliptic-curve Diffie-Hellman and Diffie-Hellman. The code for both algorithms can be found here: <https://github.com/EdmondMbadu/Reverse-Elliptic-Curve.git> <https://github.com/EdmondMbadu/Reverse-Diffie-Hellman.git>

**WORK EXPERIENCE**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Math Tutor***

* Chestnut Hill College Math Center, October 2016 – Present
* Assist students individually or in small groups and help them improve their math skills.

***Youth Representative***

* United Nations and GEM ( Global Education Motivators), November 2016 - Present
* Help organize the Student Leadership Conference held every year and many other activities at GEM. Youth Representative at the UN

**ACTIVITIES**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Co-President of the International Student Club at Chestnut Hill College
* Chestnut Hill College programming team captain for the Consortium for Computing Sciences in Colleges, Eastern Region (CCSC Eastern) in 2017 and 2018
* Putnam Competition Team member in 2018 and 2019

**ONGOING PROJECTS** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Lattice Based Cryptography & Homomorphic encryption
* Physics. *Graph-to-graph transitions as a possible basis for a discrete spacetime structure*
* Algorithms & Design. *Path and Sort Algorithm Visualizer.*