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

Selected Coursework: Abstract Algebra I & II (Spring 2017, Fall 2018), Real Analysis (Spring 2019), Algorithms in Artificial Intelligence and Robotics (Spring 2019), Mobile App Development (Fall 2019), Data Structures (Fall 2017), Computer Architecture & Logic Design (Spring 2019) 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
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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.*