ANTHONY ETIM

Address: Yale University, 10 Hilllhouse Avenue, New Haven, CT, 06511
https://www.linkedin.com/in/anthony-etim/
Email: anthony.etim@yale.edu
Phone Number: +1 (215) 485-8250

RESEARCH INTERESTS

My research interests lie in computer architecture and security, especially focusing on cloud infrastructures and the security of FPGA-accelerated cloud environments by evaluating and defending various types of side channels and covert channels, as well as how to enable secure multi-tenant Cloud FPGAs.

EDUCATION

Yale University, New Haven, CT — August 2021 – Present
Ph.D. in Electrical Engineering
Advisor: Prof. Jakub Szefer

Villanova University, Villanova, PA — August 2017 - May 2021
B.S. in Electrical Engineering
Minors: Computer Science and Computer Engineering

TECHNICAL SKILLS

Programming: C++, C, JavaScript, MATLAB, HTML, CSS, Java, Python, SQL, VHDL, Verilog/ System Verilog, Haskell
Tools: AWS tools, Docker, Xilinx Vivado/ISE, Quartus, Jupyter Notebook
Technological Devices: Raspberry Pi, Arduino

RESEARCH EXPRIENCE

Yale University, *Graduate Researcher*, New Haven, CT — August 2021 – Present

- Exploring information leaks and using Ring Oscillators (ROs) to sense voltage and thermal changes in FPGA-accelerated cloud environments.

Villanova University, *Undergraduate Researcher*, Villanova, PA — Fall 2020 – Spring 2021

- Developed a deep neural network to achieve a secrecy capacity for efficient, reliable and secure transmission of information.

Villanova University, *Undergraduate Researcher*, Villanova, PA — Fall 2020

- Used Matrix Singular Value Decomposition (SVD) technique to optimize the deep neural network (DNN) on the AVNET Ultra96-V2 FPGA development board.
- Evaluated the performance, accuracy, and energy consumption of the optimized system.

Villanova University, *Undergraduate Researcher*, Villanova, PA — Spring 2020

- Estimated the added value and future costs of coordinated economics dispatch in Central America through the electrical system load.
- Trained the neural network to forecast the electrical system load.

Villanova University, *Undergraduate Researcher,* Villanova, PA Summer 2019

- Collaborated with a team of 3 in conjunction with L3 Harris in the creation of an efficient food purchasing and tracking system for dining services to reduce food waste.
- Developed software system that is simple to populate and used to track purchased quantities and consumption to reduce waste significantly.
- Filed a provisional patent for the software system.

Villanova University, *Undergraduate Researcher,* Villanova, PA March 2018 – May 2019

- Conducted research on the development of the flow network modeling tool Villanova Thermodynamic Analysis of Systems (VTAS), which models the energy flows throughout a data center.
- Upgraded the Graphical User Interface (GUI) for the Villanova Thermodynamic Analysis of Systems (VTAS) data center flow network modeling tool.
- Developed the GUI Interface for the VTAS electrical system layout.

PROFESSIONAL EXPRIENCE

Electrical Engineering Intern, National Grid, Albany, NY, Remote Summer 2020

- Collaborated with a team of 4 engineers to help reorganize and plan the grid network using various tools.
- Modelled data to fit various design requirements and constraints of the power system.
- Assisted in the management and creation of a SharePoint Setting Repository for the handoff of smart control settings to the field device engineers.
- Collaborated with other engineers to build a database of DMX and control house plans for the grid network.

Web Developer Intern, Kumba Africa, Philadelphia, PA Summer 2018

- Built reusable code to be utilized in other projects, effectively streamlining spending.
- Contributed back-end experience and collaborated on APIs.
- Collaborated on the design and development on a team of 4 of client and server database applications.
- Analyzed project requirements to find bugs and eliminate issues within a timely manner.

TEACHING EXPRIENCE

Teaching Fellow, Yale University, New Haven, CT Spring 2023
Introduction to Computer Engineering (EENG 201)

Teaching Fellow, Yale University, New Haven, CT Fall 2022
Introduction to Electronics (EENG 200)

POSTERS

- Oct. 2019. Feastimate. Future of Packaging Consortium, Villanova University, PA
- April 2019. Improving the user interface of Data center modeling Software. (Project #1) Center for Energy-Smart Electronic Systems, Industrial Advisory Board Meeting at Binghamton University, NY.
- Oct. 2018. Improving the user interface of Data center modeling Software. (Project #1) Center for Energy-Smart Electronic Systems, Industrial Advisory Board Meeting at Villanova University, PA.
- Sep. 2018. Improving the user interface of Data center modeling Software. Undergraduate Research Symposium at Villanova University, PA.

SERVICE

Yale Cloud Computing and FPGA Security Symposium (CCFS) 2022, Co-organizer
November 2022

Yale Grad Society of Women Engineers, Undergrad Liaison Co-chair Fall 2022

LEADERSHIP EXPRIENCE

Tau Beta Pi, National Engineering Honor Society, Villanova Chapter, Vice- President
March 2020-May 2021

- Planned and conducted various professional events for the chapter's members such as the initiation information session for new members.
- Helped in the advancement of the technical and professional education of the active members by connecting them with various alumni.

Villanova Engineering Student Council, Co-Chair September 2019- May 2021

- Planned events for the College of Engineering and acted as a bridge between the students and faculty.

National Society of Black Engineers, Senator August 2017-September 2018

- Represented Villanova chapter at the 2017 Fall Regional Conference in Greensboro, NC.

SELECTED HONORS AND AWARDS

- Yale New Student Fellowship September 2021
- Dean's Award for Academic Excellence May 2021
- Dean's Award for Meritorious Service May 2021
- Dean's List Every Semester
- Klingler Unitas Prize, April 2020
  Villanova Student Entrepreneurship Competition
- Klingler Unitas Prize, April 2019
  Villanova Student Entrepreneurship Competition
- Tau Beta Pi, the National Engineering Honor Society, Spring 2020
  Selected based on academic ranking 1/8th of the junior class.