

Justin K. Htay

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Electrical Engineering/Math major seeking a signal processing internship in the summer of 2019.

EDUCATION

- Georgia Institute of Technology** August 2016 - May 2021
 - Bachelor of Science in Electrical Engineering* Atlanta, GA
 - Bachelor of Science in Mathematics* GPA: 4.00

EXPERIENCE

- Georgia Tech Research Institute (GTRI)** January 2017 - August 2018
 - High Performance Computing Co-op, Advanced Concepts Laboratory (ACL)* Atlanta, GA
 - Applied optimization techniques such as genetic algorithms to design electromagnetic structures using the FDTD method.
 - Designed frequency selective structure for use in novel periodic configuration, which helped renew the project for an additional year.
 - Maintained 10 large computing resources, extensively utilizing Bash scripting, knowledge of Linux, and problem-solving skills.
- Georgia Tech College of Computing** January 2017 - present
 - Teaching Assistant, CS1371 (MATLAB)* Atlanta, GA
 - Served as Course Manager and Homework Lead for two semesters, responsible for homework production, class operation, and liaison with professors.
 - Taught 1.5-hour recitations and held 3 hours of office hours weekly for a section of approximately 50 students.
 - Wrote 20+ homework problems on a wide range of topics and difficulty for use by over 1000 students each semester.

PROJECTS

- Efficient Normal Random Number Generation** June 2018 - August 2018
 - Implemented novel rejection-free method for generating normally-distributed random numbers in MATLAB and C.
 - Optimized to be faster than original ziggurat method for random number generation.
- 3D Printed Fragmented Aperture Antenna** January 2017 - June 2017
 - Designed 3D-printable antenna using GTRI's fragmented approach generalized to 3D space.
 - Implemented a graph theory-based connectivity algorithm in Python to ensure manufacturing feasibility.
 - Wrote a paper being prepared for publication after printed antennas had good measure-model agreement.

SKILLS

- Programming:** MATLAB, Python, bash, C, C++, Java, JavaScript, VHDL
- Software:** Linux (Ubuntu, RHEL), LaTeX, vim, Altera Quartus II, Git, LTSPICE, NI Multisim, Mathcad
- Hardware:** ARM mbed microcontroller, FPGAs, Oscilloscope, Logic analyzer, Function generator
- Coursework:** Signal Processing, Controls, Circuit Design, OOP, Information Theory, Combinatorics, Probability Theory, Graph Theory, Number Theory, Cryptography

LEADERSHIP/ACTIVITIES

- Academic Quizbowl Team** August 2016 - present
 - Treasurer/President* Atlanta, GA
 - Raised over \$3000 annually by hosting collegiate tournaments attended by schools around the Southeast.
 - Increased club attendance by 50% and sent teams to multiple tournaments yearly.