

# Justin K. Htay

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US Citizen

## OBJECTIVE

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Electrical engineering and mathematics major with experience at a national research laboratory seeking a DSP internship in Spring/Summer 2019. Strengths include coding with MATLAB, Python, bash, and C++, a strong math background in DSP techniques, experience with Linux environments, and peer leadership.

## EDUCATION

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- 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

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- 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 novel 3D-printed fragmented aperture antennas and frequency-selective structures using the FDTD method.
    - Implemented a fast graph-based connectivity algorithm in Python to ensure manufacturing feasibility.
    - 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
    - Taught 1.5-hour recitations and held 3 hours of office hours weekly for a section of approximately fifty students.
    - Wrote 20+ homework problems on a wide range of topics and difficulty for use by over 1000 students each semester.
    - Served as Course Manager and Homework Lead for two semesters, responsible for homework production, class operation, and liaison with professors.

## PROJECTS

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- 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.

## SKILLS

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- 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, PID Control, Stability, Circuit Design, OOP, Information Theory, Combinatorics, Probability Theory, Graph Theory, Number Theory, Cryptography

## LEADERSHIP/ACTIVITIES

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- Academic Quizbowl Team** August 2016 - present
  - Treasurer/President* Atlanta, GA
    - Raised over \$5000 by hosting collegiate tournaments attended by schools around the Southeast.
    - Increased club attendance by 50% and sent teams to multiple tournaments yearly.