Ken Chong

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Education

Temple University – BS in Electrical Engineering, GPA: 3.62/4.00 May 2026

Experience

Electrical Engineer Intern, Northrop Grumman – Baltimore, MD June 2025 – Aug 2025

- Designed and developed a SATCOM (Satellite Communication) antenna emulator for the Global Lightning program to perform functional checks and testing on the integrated system with various radio providers
- Incorporated modularity into the design, enabling flexibility for radios with different specifications and facilitating testing of separate connections to the Array Interface Control (AIC) interfaces

Electrical Engineer Intern, Northrop Grumman – Baltimore, MD June 2024 – Aug 2024

- Collaborated with engineers and technicians to troubleshoot reference generators, waveform generators, and multi-function receivers for programs such as Scalable Agile Beam Radar (SABR)
- Analyzed circuit card assembly schematics and drawings to probe certain frequency paths on the radar hardware using a spectrum analyzer and a multi-meter to help identify possible faulty components

Projects

Cleaning EKG Signal Oct 2024 – Dec 2024

- Created five different low-pass filters (RC, RLC, Butterworth, FIR, and IIR) in MATLAB using its transfer function and an ideal cutoff frequency to remove a 60Hz noise from an EKG signal
- Verified the effectiveness of the filter designs in preserving key characteristics using an algorithm, achieving an average accuracy of 96.67% at a low noise level (30 dB) and 91.89% at a high noise level (120.4 dB)

Musical Light Show Apr 2025 – May 2024

- Designed a summing amplifier and voltage divider as part of an audio mixer to adjust the sum of the amplitude of the left and right audio channels between 10% and the maximum of the source audio signal
- Measured the frequency content of the audio signal with a network analyzer and chose a cutoff frequency in order to design a low-pass and high-pass filter that would highlight the low- and high-frequency trends
- Included a peak detector and two separate BJT-based LED driver circuits to capture the peak of the filtered audio signal and flicker an LED at a certain rate

Audio Amplifier and Filter Jan 2024 – Feb 2024

- Determined the resonant frequency and bandwidth of a speaker using its impedance profile in order to create an equivalent RLC circuit
- Integrated a non-inverting amplifier to boost a low volume audio signal to a maximum power of 10% of the power rating of the speaker
- Added a low-pass and high-pass filter to amplify the audio signal before and after the resonant frequency of the speaker

Temperature Indicator Nov 2023 – Dec 2023

- Designed a Wheatstone bridge to minimize unnecessary resistance drifts in the thermistor from the room temperature using two potentiometers, thus providing the true current flow to the rest of the circuit
- Implemented a differential amplifier to increase the output voltage from the Wheatstone bridge, allowing the correct LED circuit to be driven and indicate the current temperature

Technical Skills

Software: Python, C/C++, Linux
Hardware: SystemVerilog/Verilog, UVM
Misc: Version Control (Git), Electronics Lab Equipment