

William Powers PhD EE

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Summary

A dynamic and results-driven Electrical Engineering PhD candidate at the University of Kansas seeking a quantitative research role where I can leverage my expertise in adaptive signal processing and embedded development. With a strong background in estimation and detection theory, advanced optimization, machine learning, and statistical modeling, I am well-equipped to deliver innovative, industry-grade solutions and excel in a fast-paced environment.

Experience

SIGNAL PROCESSING ENGINEER | MIT LINCOLN LABORATORY MAY 2025 - PRESENT

Specializing in the development of space-time adaptive processing (STAP) algorithms and their real-time deployment on embedded FPGA and GPU platforms under the Advanced Sensor Systems & Test Beds Group. This role involves design and optimization of signal processing techniques for radar and electronic sensing applications to support advanced U.S. defense capabilities.

RF SYSTEMS ENGINEER | KANSAS APPLIED RESEARCH LAB JAN 2024 - PRESENT

Developed advanced radar waveform generation algorithms utilizing digital signal processing, random process analysis, and information theory techniques. Implemented a variety of frontend radar architectures using modern Software-Defined Radio and FPGA platforms. Applied machine learning methodologies to address classification problems and distortion modeling within the radar transmit-receive framework.

EMBEDDED SYSTEMS DEVELOPER | CRESIS MAY 2023 - JAN 2024

Collaborated with a small team to develop and deploy embedded radar systems using a combination of FPGA, GPU, and CPU real-time processing techniques. Included hands-on-experience with the Xilinx embedded development platform, application of digital signal processing algorithms, and hardware implementation in C and HDL languages.

Education

PHD | ELECTRICAL ENGINEERING | UNIVERSITY OF KANSAS MAY 2024 - PRESENT

Focus: Signal Processing, Applied Mathematics | GPA: 4.00

Coursework: Adaptive Signal Processing, Random Process Theory and Estimation, Machine Learning Model Design, Parallel Scientific Computing, Embedded Digital Signal Processing Implementation

BS | COMPUTER ENGINEERING | UNIVERSITY OF KANSAS AUG 2020 - MAY 2024

Focus: Embedded Development | Academic Honors

Coursework: Digital Signal Processing, Operating Systems, Artificial Intelligence, Applied Statistics

Skills

Verilog, VHDL, C++, CUDA, Python, TensorFlow, PyTorch, NumPy, Pandas, MATLAB, Collaboration