

Charles Dunn

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Work and Research Experience

Associate Technical Staff, MIT Lincoln Laboratory, Airborne Radar Group, ISR & Tactical Systems Division — 2012-present

Developed and implemented algorithms for many radar projects including a target classifier, a signal processing testbed, and a data simulator. Quickly leveraged open source code and developed a ray-tracing visible light simulation for a vulnerability study. Solved for the PDF of a highly non-linear combination of noise distributions. Conducted large data set testing and analysis that led to novel algorithms and a new understanding of a high priority problem. Leveraged feature distribution divergence to accelerate feature selection and performance analysis of machine learning classification.

Signal Processing Summer Intern, Johns Hopkins University Applied Physics Laboratory, Global Engagement Department — 2011

Collected and post-processed I/Q data. Generated Coarse/Acquisition GPS code in Simulink for precision hardware debugging.

Hardware Design Summer Intern, Johns Hopkins University Applied Physics Laboratory, Global Engagement Department — 2010

Designed and printed circuit boards for GPS detection. Conducted a satellite signal integrity study and presented results to colleagues.

Satellite Design Engineer, Stanford University Electrical Engineering, VLF Group — 2010

Radiation Protection Summer Intern, Hitachi Japan, Nuclear Plant Design Department — 2009

Ground Station Design Summer Researcher, Stanford University Electrical Engineering, VLF Group — 2008

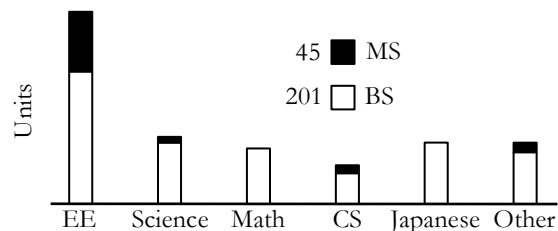
Education

Stanford University MS in Electrical Engineering 2012 – Communication Systems Concentration

Stanford University BS in Electrical Engineering 2011 – Circuits and Devices Concentration

Massachusetts Institute of Technology Advanced Study Program 2015 – 6.437 Inference and Information

4.00/4.00	800/800
Graduate GPA	GRE Quantitative
3.80/4.00	35/36
Undergraduate GPA	ACT Composite



Interest (↑) and Experience (↔)

	↔			
↑	Image Processing	Information Theory	Optimization	Quantified Self
↑	Signal Processing	Data Compression	Cryptography	Design of Experiments
	MATLAB	Machine Learning	C/C++	Nuclear Power
	Japanese	Linux	VLSI Layout	Quantum Mechanics

Personal Interests

0	1	2	3	4	5	6	7	8	20
Coffees consumed per day	Wool hat knitted	Internet published 50 word stories	200 mile Ragnar relay races	Minute 52 second PR mile	Months lived in Japan	YouTube videos with >4k views	Ball cascade juggling pattern	States camped in	Miles per day on the VT Long Trail