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. Solved for the PDF of a highly non-linear combination of noise distributions. Created algorithm testing environment and suite of tools for efficient algorithm analysis. 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. Quickly leveraged open source code and developed a ray-tracing visible light simulation for a vulnerability study. Empirically determined the linear indices of all diagonal elements of a variable-sized data hypercube.

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

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

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

Active US Security Clearances

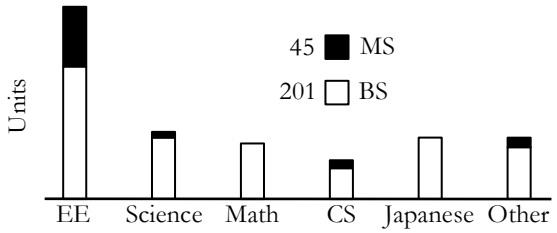
Education

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