Brandon Stafford

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Somerville, Massachusetts
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Education

M.S. in Mechanical Engineering, 2002
Stanford University, Palo Alto, CA

B.A. in English, 1995
Pomona College, Claremont, CA

Work

Tufts University

Lecturer in Mechanical Engineering, *Medford, MA, 2016-2018*
Taught How To Make Stuff for first-year students and Electronics For
Mechanical Engineers for seniors.

New American Public Art

Co-founder, Director of Engineering, *Somerville, MA, 2012-present*
Designed and built interactive public art for clients worldwide. Awarded
residency at Autodesk Buildspace, 2017-2018.

Rascal Micro

Founder and sole proprietor, *Somerville, MA, 2010-2016*
Designed and built innovative electronic hardware for the Internet of Things.
Venture was based in Artisan's Asylum, the largest makerspace in the eastern US.

GreenMountain Engineering

Principal Engineer, *Somerville, MA, 2006-10*
Designed hardware for renewable energy startups. Managed office and workshop.

IDEO

Mechanical Engineer, *Lexington, MA, 2004-05*
Designed LASIK eye surgery machine, prototyped Parkinson's liquid drug delivery system.

Mindtribe Product Engineering

Embedded Systems Engineer, *Palo Alto, CA, 2002-04*
Worked as an embedded systems consultant on small project teams. Wrote firmware in C and assembly. Designed, built, tested, and debugged PCBs.

Stanford University

Lecturer in Mechanical Engineering, *Palo Alto, CA, 2004*
Taught ME218C, graduate microprocessor communications course. Revised curriculum to include Ethernet and TCP/IP stack.

Smart Product Design Lab

Teaching Assistant, *Stanford University, Palo Alto, CA, 2001-02*
Debugged electronics all night long for ME218, a rigorous, year-long course in embedded systems.

Projects

- *My Garage, Palo Alto, CA, 2001-02*
  Converted Porsche 914 to electric power. Designed and fabricated transmission interface from scratch at Stanford Product Realization Lab.

- *Stanford Solar Car Project, Palo Alto, CA, 1997-99*
  Team leader for the design, construction, and racing of solar car.

Publication history

- Pysolar software library, an open source library for simulating the irradiation of any point on earth by the sun, 2007-2008. As of February 2018, has 20 contributors and 64 forks on Github.

- M. Davis, B. Stafford, M. Martinez, D. Sanchez. Tracker Accuracy: Field Experience, Analysis, and Correlation with Meteorological Conditions. Proceedings 24th European Photovoltaic Solar Energy Conference, Munich, 2009

- Jorge G. Cham, Brandon Stafford, and Mark R. Cutkosky. See labs run: A design-oriented laboratory for teaching dynamic systems. Proceedings of the 2001 ASME International Mechanical Engineering Congress and Exposition: 11-16 November 2001 New York, pp. 1-8, 2001

Awards, honors, patents

- Postscapes Internet Of Things Award Winner, Best Open Source Project, Editor's Choice, for the Rascal, 2011

- US Patent 2014/0234959: Method and device for removing particles from liquid and placing them into a holding device

- Counselor of the Year, Westminster Summer Camp, Atlanta, GA, 1996

Products cloned by competitors

- Rascal Micro Precision Voltage Shield, designed by me in early 2013. Cloned in late 2014 by DT Studio. Offered at 3x lower price, 16x decrease in performance