Daniel Breen

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EDUCATION

UC SAN DIEGO
PhD in Physics
Expected June 2017 | La Jolla, CA

MS in Physics
June 2013 | La Jolla, CA

NEW MEXICO TECH
BS in Physics
May 2011 | Socorro, NM

SKILLS

PROGRAMMING
2+ years Experience
Python • Shell • Matlab • LaTeX
Familiar:
C • C++ • CUDA • JavaScript •
SQL
SCIENTIFIC WRITING
MACHINE LEARNING

EXPERIENCE

UC SAN DIEGO | Graduate Research Assistant
Expected August 2014 – June 2017 | La Jolla, CA

- Developed and applied statistical methods for non-convex optimization to estimate parameters in nonlinear systems
- Formed fruitful and close new collaborations with researchers across disciplines to apply my research group's tools to different biomedical applications. In one case, understanding the causes of Alzheimer's disease. In another, to characterize the dynamic behavior of a neuromorphic VLSI circuit that emulates membrane dynamics and channel kinetics
- Constructed novel biophysical models of poorly understood neuronal systems which could be used to infer difficult to measure or experimentally inaccessible properties of neurons

UC SAN DIEGO | Teaching Assistant

- 5+ years experience teaching undergraduate physics lab and lecture courses