Daniel **Padé**

Computer Scientist · Engineer · Mathematician

(+1) 901-300-6878 | djpade@pm.me | cse.sc.edu/~pade | qfjp | qfjp | qfjp

Education

University of South Carolina — Columbia, SC

Ph.D. in Computer Science & Engineering — Aug 2013 – Dec 2019

Boston University — Boston, MA

BA – Majoring in Physics — Aug 2007 - Jun 2011

Skills

Programming Python (pandas, numpy, scikit), Spark(SQL), TensorFlow, Java, Scala, C, Haskell, Git, LaTeX, SQL, HTML/CSS

Mathematics Complexity Theory, Statistics, Universal Algebra, Algorithmic Design and Correctness

Research Quantum Optics, Semiconductors, Experimental Design

Specialties Physics of Computation, Quantum Computation, Computational Complexity, Type Theory, Computational Physics

Experience

The Data Incubator — New York, NY

Fellow — Jun 2019 – Aug 2019

Analyzed a subset of the Twitter user graph (≈ 4 mil users) to determine influential users by speech content.

University of South Carolina — Columbia, SC

Research Assistant — Aug 2013 – Dec 2019

Research in Computer Science/Mathematics. Specializing in Quantum Computation, Quantum Algorithms Circuit Theory, Learning Machines, and Computational Complexity.

University of South Carolina — Columbia, SC

Research Assistant — Aug 2014 – Jun 2017

Research in Semiconductors and Quantum Optics. Created FDTD simulations for quantum dot and second harmonic generation experiments. Analyzed over 1GB of data to predict electromagnetic radiation within quantum dots. Led group of 3 undergraduates in building and testing electrospinning apparatus.

Boston University — Boston, MA

Lead Simulation Developer/Research Assistant — Jan 2011 - Jun 2012

Dark Matter and Neutron Time Projection Chamber Research Associate specializing in the simulation of a TPC dark matter experiment through the use of SRIM and Geant4. Simulated and analyzed over 1GB of data to predict particle collisions.

ANDCorp — Boston, MA (remote)

Lead Simulation Developer — Jun 2012 – Aug 2013

Fast Neutron Detector Worked in collaboration with MIT to provide an alternative fast-neutron detector to aid in the detection of nuclear materials. Primarily used MCNP/X and Geant4 toolkits in digitizing the detector physics. Simulated and analyzed over 1GB of data in to verify detector response to particle collisions.

University of South Carolina — Columbia, SC

Lecturer — Aug 2014 – May 2017

Topics included Computer Architecture and Low Level Programming (MIPS/C programming & architecture); Foundations of Computer Science (Automata/Language theory, Regular Expressions), and Introduction to Programming (Basic Techniques and Data Structures in Java).

Honors & Awards

2014 1^{st} **place,** Boeing Hackathon — Columbia, SC

2015 **Outstanding Graduate Instructor,** USC Graduate School — Columbia, SC

2015 2^{nd} **place,** Gamecock Computing Symposium — Columbia, SC

Publications (Selected)

Glass-panel ^{6}Li neutron detector. — HST IEEE

Inglis, A., Rosenfeld, E., Yellen, M., **Pade, D.**, Damask, S., Hazen, E., Ahlen, S., Tomita, H., & Hartwig, Z. — 2012