CLEMSON UNIVERSITY

July 1, 2015

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Citi
399 Park Avenue
New York, NY 10043

Dear Recruiter,

It is with great interest that I am applying for the position of Data Scientist, Global Analytics & Insights at Citi, as posted on LinkedIn. My doctoral research on astrophysical fluid dynamics at Clemson University was almost entirely computationally based, so I have accrued an experience with multiple programming languages, including Fortran 90+, C/C++, Python, Matlab and R, in a Linux environment, as well as with profiling and debugging programs such as Intel's VTune, gdb, and Valgrind.

I have thrived at Clemson both working independently on my own project and with colleagues on coursework and their research. My coding strengths as a programming mean that I can write code correctly and document/comment appropriately for future users. At Clemson, we were required to present our research before the Astrophysics group every semester, so I also have developed strong oral and written communication skills.

I believe that I would be a terrific choice for the Data Scientist, Global Analytics & Insights position with your company. My résumé included in this application gives more details of my background, showing that I am well-qualified for this position. At the top of this document, you can find my email address and phone number which you can use to contact me for an interview; I can be reached by either method to schedule an interview.

Thank you for your time and consideration,

Joshua D Wood

JOSHUA D WOOD

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EDUCATION

Clemson University *May 2015*
Ph.D. in Physics
Dissertation: *Multidimensional Simulations of Non-linear Cosmic Ray Production in Supernova Remnant Evolution*

Indiana University of Pennsylvania *August 2009*
M.S. in Physics
Thesis: *Optical Properties of Low-Dimensional Semiconductors*

Rutgers University *May 2007*
B.S. in Physics

EXPERIENCE

Clemson University September 2009 - May 2015
Graduate Student *Clemson, SC*

- Solved numerical hydrodynamics and second-order differential equations using and modifying highly parallelized Fortran 90+ and C-based finite volume codes
- Post-processing 4×61 GB datasets for synthetic emissions using Python, C++ & Fortran 90 codes
- Instructor for multiple Laboratory classes (algebra based, calculus based)
- Instructor on record for Introduction to Programming course (graduate only)

University of Alabama July 2010, July 2011, May 2012
Research Assistant *Huntsville, AL*

- Research assistant to collaborator, Dr Ken-Ichi Nishikawa
- Investigated numerical methods of hydrodynamics for dissertation
- Investigated dynamic evolution of supernova remnants for dissertation

Indiana University of Pennsylvania August 2007 - August 2009
Graduate Student *Indiana, PA*

- Numerically modeling optical properties of semiconductors using Python & Fortran codes
- Operated Physics Learning Center
- Performed outreach to local high schools

Rutgers University Sept 2006 - May 2007
Research Assistant *Camden, NJ*

- Produced thin films (micron scale) of polymers (PMMA, polystyrene) using laser ablation
- Studied surface morphology of thin films via AFM and electron microscope

TECHNICAL STRENGTHS

Computer Languages	Fortran 90+, C/C++, Latex, Lua, Python, Bash, Matlab/Octave Excel & Powerpoint (and equivalent), some SQL, R & Hadoop
Numerical Methods	Numerical integration/differentiation, finite difference/volume methods, Monte Carlo, regular expressions, linear algebra, discretization imputation, MPI, OpenMP
Operating Systems	Linux (primary OS), Unix, Windows

DEPARTMENTAL SERVICES

Clemson University September 2010 - May 2015

- Organized weekly intra-departmental seminar
- Moderator for graduate student listserv
- Graduate student liaison for faculty hiring committee (Spring 2012)