

## Thomas Gadfort

MS 122, Fermilab • Batavia, IL 60510  
206.351.4510 • tgadfort@fnal.gov

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July 22, 2014

Dear Curve Analytics,

With this letter and attached resume, I am expressing my interest in the Predictive Modeler position. I have a wealth of experience in data analysis, project management, and research, along with extraordinary communication skills that will set me apart from other applicants.

My background enables me to provide expertise in the areas of data science and quantitative analysis. In addition, I have established a productive career by building a solid skill set that serves as a firm foundation for success within a variety of agile, fast-paced environments.

Please consider the following highlights from my career and resume:

- 10+ years of research experience in the field of high-energy physics, including roles supporting experiments for the U.S. Department of Energy and postdoctoral research for Columbia University.
- Extensive experience manipulating large datasets using advanced statistical techniques.
- Experience working in collaborative environments with teams ranging from 50 to 3,000 individuals.
- History of mentoring younger colleagues including the supervision of three Ph.D. students from Columbia and Stony Brook Universities.
- I have given numerous presentations on my work and that of my colleagues at internal collaboration meetings and international conferences, and I have written several publications for science journals.

Recognized for creative thinking, leadership, and problem solving expertise, I have excelled in roles demanding exceptional communication and writing skills. I have benefited past employers with exceptional communication skills and innovative solutions. I am attaching a resume to provide you with further details of my experience for your evaluation.

The combination of education, experience, and technical skills I possess could be of immediate benefit to your organization. I have a strong interest in applying my knowledge and skills to design and conduct data investigations that address the research needs of Curve Analytics' mission. I welcome the opportunity to meet with you to discuss my qualifications and how I can add value to your team.

Thank you for your consideration, and I look forward to hearing from you.

Sincerely,

Thomas Gadfort

## **Data Science & Quantitative Analysis Professional**

Driven, technically-savvy professional with a decade of accomplishments in scientific research in experimental particle physics seeking to bring talents to the field of data science and quantitative analysis. Experience collaborating with and leading diverse, international teams on the analysis of large, complex data for the U.S. Department of Energy. Exceptional communicator with experience presenting results and drafting content for a variety of collaboration materials and publications. Ph.D. with a history of academic excellence.

### **Areas of Strength**

Data Analysis • Data Modeling • Statistical Analysis • Research • Big Data • Quantitative Analysis • Data Mining  
Project Management • Decision Support • Presentation • Public Speaking • Team Leadership • Communication

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## **PROFESSIONAL EXPERIENCE**

FERMI NATIONAL ACCELERATOR LABORATORY, Batavia, IL

**Associate Scientist**, 2012 - Present

Responsible for scientific data analysis and project management for this U.S. Department of Energy national laboratory specializing in high-energy particle physics.

- Developed a C++ framework for an experiment and simulation allowing for accurate prediction of data available for analysis.
- Established the reliability of an analysis method designed to extract certain properties from high-volume time-dependent signals using several  $\chi^2$  minimization and matrix inversion techniques with the RooStats C++-based statistical framework.

BROOKHAVEN NATIONAL LABORATORY, Upton, NY

**Goldhaber Fellow**, 2009 - 2012

Three-year appointment to support scientific research for this U.S. Department of Energy multidisciplinary laboratory dedicated to the advancement of physics, chemistry, and biology, and other sciences.

- Recruited as a leader of the ambitious and renowned ATLAS experiment team, contributing initial discovery, coordination of analysis and mining efforts, and sophisticated statistical analysis of data.

COLUMBIA UNIVERSITY, New York, NY

**Postdoctoral Researcher**, 2007 - 2009

Postdoctoral fellow for the private ivy league research university located in NYC.

- Served as a group leader during the development of a highly efficient algorithm to identify bottom-quark jets using a novel multivariate technique known as boosted decision tree.
- Pioneered use of the matrix-element analysis technique to for an experiment, a method isolates specific signal events in the presence of large backgrounds by integrating over Bayesian priors.

## **EDUCATION & HONORS**

**Ph.D.**, High Energy Physics, University of Washington, Seattle, WA (2007)  
Eugene Kenneth Miller Award for Graduate Research

**B.A.**, Physics and Mathematics, University of Tennessee, Knoxville, TN (2001)  
Douglas V. Roseberry Award for Excellence in Physics  
Sigma Pi Sigma Honor Society

## **SOFTWARE & TECHNICAL EXPERTISE**

- ☒ Office Applications – Microsoft Office (Word, Excel, PowerPoint), Mac OS (Keynote, Pages)
- ☒ Operating Systems – Windows 2000/XP/7, Linux/Unix, Mac OS 10+
- ☒ Programming Languages – C, C++, FORTRAN, Visual Basic, Java, Perl, BASH and Python scripting
- ☒ Web Development – HTML, XML, PHP, JavaScript, Python
- ☒ Scientific Applications – ROOT C++ framework, R, GEANT4, GNU Scientific Library, Mathematica