Jeffery Thomas Mitchell

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EXPERIENCE

- **Data Analysis:** Over 21 years of experience in results-driven analysis of large scientific datasets. Integral part of the data analysis team that discovered the Quark Gluon Plasma. Primary investigator on many analyses that have been published in peer-reviewed scientific journals.
- **Software Development:** Over 21 years of experience developing and deploying scientific software in a production environment for 6 major high energy physics experiments. Successfully completed applications include pattern recognition software with 99% tracking efficiency, machine learning for data analysis, Monte Carlo simulations, real-time data monitoring, data visualization, and scientific animations.
- **Coordination:** Coordinator of the data production and data mining group for the PHENIX experiment. Coordinator of physics data analysis and simulation projects for the PHENIX experiment. Coordinator of pattern recognition software development and deployment for the PHENIX experiment.
- **Documentation and Communication:** More than 180 peer reviewed scientific papers. Many invited presentations at international scientific conferences. Produced educational animations that have appeared on news programs including ABC, CNN, and BBC.

TECHNICAL SKILLS

- **Languages:** C++, Python, Java, Perl
- **Databases:** PostgreSQL
- **Machine Learning:** includes linear and non-linear regression, regression trees, kNN and naïve Bayesian classification, neural networks, support vector machines, random forests
- **Statistical Tools:** R, Matlab, ROOT (a scientific package developed by CERN)
- **Platforms:** Linux, Windows

EDUCATION

Yale University, New Haven, CT
Ph. D. (Nuclear Physics) - December 1992.
M. S. (Nuclear Physics) - May, 1988,
M. Phil. (Nuclear Physics) - May, 1988.

Louisiana State University in Shreveport, Shreveport, LA
B. S. (Physics) - May, 1986.

PAST EMPLOYMENT

1995 - Present:

Brookhaven National Laboratory - Physicist
Projects: Data analysis of large data sets resulting in scientific publications, data mining in a production environment, pattern recognition development and deployment, Monte Carlo simulations, development and coordination of detector calibrations, scientific visualization, education.

1992 - 1995:

Lawrence Berkeley National Laboratory – Research Fellow
Projects: Physics data analysis resulting in scientific publications, completed a pattern recognition package for the STAR experiment, Monte Carlo simulations, completed scientific visualization package for the STAR experiment, completed research project for microstrip gas chamber development.

PROFESSIONAL MEMBERSHIP AND AWARDS

Member of the Relativistic Heavy Ion Collider User's Group Executive Committee, 2000-2002, 2015-present

Member of the Critical Point and Onset of Deconfinement International Organizing Committee, 2013-present

Member of the Beam Energy Scan Theory Collaboration, 2015-present

Member, American Physical Society

Member, Phi Kappa Phi

Recipient of the 2001 Brookhaven National Laboratory Sambamurti Prize.

Recipient of the Distinguished Alumni Award, LSU-Shreveport, 2011