Raghav Kunnawalkam Elayavalli

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Executive Summary:

- PhD (successfully defended on July 7th 2017) at Rutgers University with 5+ years of experience in a research driven environment, with thesis title: “Jetting Through The Primordial Universe”
- Award winning researcher and effective communicator – invited speaker at more than 15 international conferences and seminars around the country
- First author in top scientific publications and conference proceedings in data analysis (4) and theoretical modeling (4), possessing effective writing skills
- Multiple analysis ongoing on the utility and importance of Deep Convoluted Neural Networks for classification and multi-dimensional regression analysis in high energy particle physics

Relevant Technical Skills:

- Computer Languages: C++, python, HTML5, fortran, JavaScript
- Software Development Tools: SVN, GitHub (github:/rkunnawa)
- Operating Systems: Apple OS X, Linux, Microsoft Windows family

Professional Experience:

Doctoral Candidate at the Department of Physics – Rutgers University (June 2013 – Present)
Advisor: Prof. Sevil Salur

- First inclusive bias-free jet measurement of nuclear modification from of collision heavy ion data at CERN.
- Introduced novel data-driven methods to significantly increase signal over noise extending to new kinematics
- Lead author of the experimental data quality monitoring software to monitor non-linear detector fluctuations.
- Co-convener of CMS heavy ion jet reconstruction software framework from August 2014 to December 2016
- Insightful mentor of 3 Rutgers undergraduates, currently NSF/DOE award winning graduate students

Research Associate at CERN, Switzerland (April 2016 – August 2016)
Advisor: Dr. Korinna Zapp

- Co-authored an essential updated to the JEWEL heavy ion MC with accurate predictions of recent LHC Data
- Introduced new analysis tools to lead the community towards a more quantitative understanding of Data vs MC
- High impact publications and software packages released to public to facilitate results reproduction

Recent Honors and Awards:

- **Marie Curie Early Stage Researcher Fellowship**, European Union funding CHF 12000 April 2016
- **Claud Lovelace Experimental Research fellowship**, Physics Department, Rutgers AY 2016
- **Graduate research Fellowship**, Physics Department, Rutgers 2013-2015 July, August 2016 – present
- **Distinguished Performance**, ACM (Associated Colleges of Midwest) Intercollegiate Programming Contest ‘10

Education:

Doctor of Philosophy in Physics — Oct 2017 (expected)
Rutgers University New Brunswick, New Jersey USA

Masters of Arts in Physics — Dec 2012
Stony Brook University Long Island, New York USA

Bachelors of Arts (Hons.) in Physics — May 2011
Cornell College Mount Vernon, Iowa USA

Relevant Interests:

- Data Science @ LHC community member and participant of workshops held at CERN (2015) and FermiLab (2017)
- Organizing tutorials for high school and summer 2017 REU students at Rutgers on python and Machine Learning